

THE
QUARTERLY JOURNAL
OF
ECONOMICS

APRIL, 1897

THE SAFETY OF THE LEGAL TENDER PAPER.

THE legal tender notes of the United States present now, as they always have presented, an appearance of great simplicity. There are still but two such issues, the United States notes of the Civil War and the coin notes of 1890: their legal tender power has few exceptions, and the obligation for their redemption is to be read in a few lines. Take away the confusing element introduced by the silver agitation, which is quite extraneous to the original conception of the legal tender paper, and what is in itself better suited for easy comprehension or has more *prima facie* attractions than a system of government notes, established by the authority and resting on the credit of the nation?

But, simple as the notes themselves may appear, it is by no simple process that the conditions under which they are now issued have been arrived at. Our legislation on this subject now covers a period of thirty-five years. During that time there has been a rapid succession of important legislative acts bearing upon the legal

tender paper and some administrative acts of equally serious import. The system, as we have it to-day, is, therefore, a product, not of any compact declaration by the law-making power, but of a singularly complex series of laws and executive orders. It is to some aspects of this series,—or, in other words, to some aspects of the history of the legal tender issues,—and to some considerations flowing therefrom, that I desire to direct the attention of readers of this article. Accepting the constitutionality of the legal tender acts, as settled by the repeated decisions of the Supreme Court, and waiving all questions as to the necessity of the acts or of either of them, as foreign to my present subject, I wish to inquire what inferences are to be drawn from the manner in which the authority of Congress has been exercised, and how far the *prima facie* attractions of our paper legal tender are thereby affected. For this purpose, it will be necessary to make a short recapitulation of the chief legislative and executive acts which mark the period opened by the first Legal Tender Act and relate to the same subject-matter, and to do this even at the risk of stating much with which the reader must be supposed to be familiar.

1. The leading advocates of the act of February 25, 1862, pressed that measure upon Congress as a temporary expedient forced upon the country by the stress of war (1861-62, ch. 33). They also pressed it as a measure which had its place in a large scheme of legislation, by which they expected to provide a permanent paper currency exclusively of bank notes. To meet the urgent needs of the Treasury, a limited amount of legal tender notes were to be issued, exchangeable at the pleasure of the holder for United States bonds, and the bonds were to be made the basis of a bank currency. Issued, exchanged, and reissued, the notes were expected to open

a market for a large amount of bonds, and finally to be absorbed and disappear. It may be doubted whether the majority in Congress were then ready to accept the whole of this comprehensive scheme, but there is no doubt that the majority agreed to the issue as something not intended long to survive the exigency which called it into being. Even with this restricted view of the scope of the legislation, the provision making the notes exchangeable for bonds was plainly a matter of prime importance. It was looked upon as offering a possible outlet for the notes in case the circulation were overloaded with them, and it provided the means for their withdrawal when the present need should have passed by and the public credit should have begun to advance. The bonds having been made coin bonds, the exchangeability of the notes was the ground of hope for their present credit and ultimate redemption.

2. But the expectations of the advocates of the first Legal Tender Act were disappointed. Although some sanguine leaders had predicted that the whole of the first issue would not be used, a second issue was called for by the Treasury, and a third. It was also discovered that, so long as notes could be exchanged for bonds at par, the price of bonds could not rise above that point, and that with this limitation of possible profit the present inducement for exchange was too small to invite large operations. At the instance of the Treasury, therefore, and in order to facilitate the sale of bonds, Congress, in the Ways and Means Act of March 3, 1863, declared that the right to exchange the notes should cease from the first day of the following July (1862-63, ch. 73, § 3). One year, therefore, saw the central provision of the original system abolished, and without debate in either House. "This act," says Mr. Sherman, in one of his numerous references to the subject, "though convenient in its temporary results, was a most fatal step, and for my part in acqui-

escing in and voting for it I have felt more regret than for any other act of my official life." *

3. The summer of 1864 saw the worst fears as to a resort to a paper legal tender fully justified. At the end of June the outstanding United States notes were \$431,000,000; there were also in circulation \$168,000,000 of interest-bearing notes which were a legal tender for their face; and, in response to the urgent demand of the Treasury, authority for an additional issue of \$200,000,000 of similar interest-bearing legal tender notes was to be embodied in the Ways and Means Act. Gold, which in April stood at 180, was starting on the rapid ascent which carried it to 240 on the 1st of July. Congress was engaged in an unsuccessful effort to prevent time-sales of gold and of foreign exchange, by means of what has been known as "The Gold Bill"; and confusion, distrust, and discredit were rapidly gaining ground. As a reassuring measure, therefore, to quiet public alarm, a clause was incorporated in the Ways and Means Act declaring that the total amount of United States notes should never exceed \$400,000,000, and a possible temporary addition of \$50,000,000, if required for the payment of private deposits then held by the Treasury (1863-64, ch. 172, § 2). This limitation of the issue of United States notes was a wise concession to public opinion, and without doubt had its influence in the next few months in raising the public credit; but the ability of Congress to maintain such a restriction under the pressure of any great exigency was never put to a severe test, and the happy ending of the war nine months later abruptly introduced an entirely new order of questions relating to the legal tender issues.

4. So far as the temper of the public was concerned, the first months of peace were remarkably favorable for measures looking towards specie payment and the withdrawal of the legal tenders; and it was probably a mis-

* Speech in the Senate, March 6, 1876; to be found in his *Speeches*, p. 496.

fortune that Congress was not then in session to improve a moment which in other respects was opportune, and to do this before the apprehension of contraction or any of the real dangers of that process should be seriously felt. But when Congress met in December, 1865,—after the announcement of his policy by Secretary McCulloch,—the strength of feeling was still such that, by a vote of 144 to 6, the House of Representatives adopted a resolution of cordial concurrence “in the views of the Secretary of the Treasury in relation to the necessity of a contraction of the currency with a view to as early a resumption of specie payments as the business interests of the country will permit,” and pledged its co-operation to that end.

5. A secretary gifted with tact in dealing with other men, and standing aloof from the political contests of the time, might perhaps have made this proffer of concerted effort the basis of a successful policy; but Mr. McCulloch had not that tact, and was so far identified with the reconstruction policy of President Johnson as to share the odium incurred by the latter in his struggle with Congress. Four months after the declaration of December, 1865, Congress, in making provision for the retirement of Treasury notes, forbade the Secretary to retire more than \$10,000,000 of United States notes within the next six months, or more than \$4,000,000 in any one month thereafter (1865-66, ch. 28).

6. The Secretary did not use to its full extent the authority allowed him by Congress. The commercial revulsion which began in London in 1866 was followed by continued depression in this country, the public mind became more and more sensitive on the subject of contraction, and wild demands began to be made for the payment of the five-twenty bonds in legal tender notes. The Finance Committee of the Senate in December, 1867, reported a bill providing for the exchange of these bonds for a five per cent. coin bond, the offer resting upon the

avowed calculation that the right of the public creditor was doubtful, and that he would find it for his advantage to take a bond bearing a lower rate of interest and free from cloud. In the discouraged state of mind indicated by this proposition, Congress, in February, 1868, "suspended" altogether the authority previously given to the Secretary "to make any reduction of the currency by retiring or cancelling United States notes"; and thus the first movement for a return towards specie was peremptorily closed (1867-68, ch. 6). The notes outstanding had been reduced from about \$400,000,000 to \$356,000,000; but this reduction had been offset by an increase of national bank notes during the same months.

7. Happily, the Republican National Convention in July, 1868, planted itself on firm ground as to the payment of the five-twenty bonds, and in its platform denounced "all forms of repudiation" and called for the payment of all creditors, "not only according to the letter, but the spirit of the laws." The Democratic party a few weeks later gave its support to what was supposed to be the popular craze of the day, and upon this issue and others was badly beaten. General Grant was elected after an excited canvass; and the popular verdict was registered in an "Act to strengthen the Public Credit," approved in March, 1869, being the first act passed under the new administration. This law declared the faith of the United States to be pledged to the payment of both notes and bonds in coin, except when the law under which they were issued had expressly provided for payment otherwise, and closed by further pledging the faith of the United States "to make provision at the earliest practicable period for the redemption of the United States notes in coin" (1869, ch. 1).

8. Nothing was done towards giving effect to this pledge. Secretary Boutwell in December, 1869, suggested that authority should be given for reducing the

circulation, as occasion might offer, by an amount not exceeding \$2,000,000 in any one month; but it was clear that he did not regard the matter as of any present importance, and no action was taken. Congress had apparently acquiesced in the policy of allowing the country to "grow up" to a currency admitted to be excessive. A year or two later, however, it appeared that the Treasury had on more than one occasion issued legal tender notes in lieu of a part of those "retired and cancelled" by Secretary McCulloch. The question as to the legality of any such reissue was referred by the Senate to its Finance Committee; and the majority of that committee, headed by Mr. Sherman, reported a resolution that the Secretary "has not the power under existing law" to issue notes for any portion of those retired under the act of 1866. The question involved was of moment; for, if \$5,000,000 could be issued by the Secretary at his discretion, so could \$44,000,000, and the whole of the ground supposed to have been gained by the payment of this form of debt might thus be lost. The resolution, however, was not called up for action, and at the end of the session the Secretary might easily have felt that his action had the tacit acquiescence of Congress.

9. Mr. Boutwell's successor, Secretary Richardson, having paid out in the revulsion of 1873 a large part of his cash balance in the vain effort to relieve the money market by the purchase of bonds, soon found himself so crippled by the decline of revenue that in October, 1873, he began paying out the retired notes for ordinary expenses; and this reissue was continued until at the beginning of February, 1874, when the revenue had recovered from its collapse, \$26,000,000 of the notes were again in circulation, raising the total to \$382,000,000.

10. At the long session of 1874 Congress first passed the so-called inflation bill, vetoed by President Grant, by which the issue of legal tender notes was to be increased

to \$400,000,000 and the possible issue of national bank notes was to be raised to the same point, and then adopted the Compromise Act of June, 1874, by which, among other provisions, it was declared that the amount of legal tender notes should be fixed at \$382,000,000 (1873-74, ch. 343, § 6). The amount reissued by Secretary Richardson was thus made a part of the permanent currency, and so remained until the work of withdrawal began anew under the Resumption Act of 1875.

11. The Resumption Act was not prepared with open doors; and, doubtless, there is much in its secret history which would be of great interest. Certainly, its public history, if we view it as a measure for financial reform, is unique. The bill, introduced by the Finance Committee of the Senate, was admitted to be the work of a party caucus, in which no agreement could be reached except by consenting to leave a principal point unexplained. Whether legal tender notes, when "redeemed" in the language of the bill, could be reissued or not, Mr. Sherman, who had charge of the measure, steadily refused to say, knowing well that any explicit answer would drive off one wing or the other of his expected majority, and deeming it his business to carry the bill through by whatever means. It was passed by the Senate, therefore, with an obstinate refusal on the part of its chief advocate to state the meaning and effect of its leading provision. In the House all risk of explanation was avoided, by forcing the bill through without debate under the operation of the previous question; and thus the great work of resumption was entered upon, with absolutely no authoritative determination of the main question whether redemption would end the legal tender currency or not (1874-75, ch. 15). It was only certain that, when the measure should finally be interpreted for purposes of administration, one section or the other of its supporters would meet with bitter disappointment.

12. As a preparation for actual specie payment in 1879, the Resumption Act provided for a gradual reduction of outstanding legal tender notes from \$382,000,000 to \$300,000,000, so far as such a reduction could be offset by the issue of national bank notes by new banks, or by old ones increasing their circulation. This device for avoiding a contraction in the total currency was defeated by an unexpected surrender of bank circulation under the pressure of the times; and the consequent net reduction of legal tender notes and bank notes came to be regarded in some parts of the Union as the cause of the depression, which deepened in this country in 1876 and 1877 as it did in the greater part of Europe. When Congress came together in October, 1877, a bill was at once reported to the House by the Committee on Banking and Currency to repeal the third section of the Resumption Act, this section containing all the provisions as to the redemption of the United States notes. With an amendment exempting from repeal the provision for free banking, this bill was passed in the House and went to the Senate. That body amended the House bill so as to make it simply a bill for making United States notes receivable in payment for the four per cent. bonds and also for customs duties, and finally passed it in this form in the following June by a vote of 45 to 15. But, while this measure was pending in the Senate, and in view of the probable disagreement of the two Houses, the mover of the House bill introduced there a short bill to forbid the further retirement of legal tender notes; and this was hurriedly passed through both House and Senate, and became a law May 31, 1878 (1877-78, ch. 146). This momentous act, which finally settled the question as to the meaning of "redemption" in the Resumption Act and completed the conversion of the United States notes into a permanent currency,—an act scarcely inferior in its importance to the Resumption Act itself,—was adopted almost without

debate. The issue at that moment stood, as it stands at present, at \$346,681,016.

13. The reserve of gold, accumulated for the redemption of legal tender paper under these changed conditions, received a tardy recognition from Congress in 1882, when, under the act for extending the charters of the national banks, it was provided that the issue of gold certificates by the Treasury should be suspended "whenever the amount of gold coin or gold bullion in the Treasury reserved for the redemption of United States notes falls below one hundred millions of dollars" (1881-82, ch. 290, § 12). No means of replenishing this reserve have ever been provided, except those named in the Resumption Act,—surplus revenues and bonds of the descriptions authorized by the Refunding Act (1869-70, ch. 256).

14. The winter of 1889 and 1890 brought a fresh outburst of agitation for the free coinage of silver, at a time when the compulsory coinage of silver dollars under the Bland Act of 1878 was finally submerging the Treasury. The result of several months of debate in Congress was the passage of the Silver Purchase Act of 1890, by which Congress required the purchase of 4,500,000 ounces of silver per month, payment therefor to be made in "coin notes," which were to be a legal tender and to be withdrawn from circulation only when replaced by an equal amount of the silver dollars (1889-90, ch. 708). This provision for adding to the legal tender paper is the only part of the act which there is occasion to consider here. The reduction of legal tender circulation had been made impossible by the act of 1878; and Congress now ordered its periodical increase, by such an amount as should be required by the stated purchases of silver, without limit, and with no discretionary power of suspension in any exigency. It was declared to be the policy of the United States to maintain the "parity" of gold and silver; but no provision was made for an increase of the

gold reserve established for the protection of the United States notes, in case "parity" meant the maintenance of the gold standard. It was provided on the other hand that the coin notes might be redeemed in silver at the pleasure of the Secretary, so that the decline to the silver standard appeared to be a matter of probable ultimate necessity. The new measure was, therefore, a surprising sequel to the long effort made to place the legal tender notes on the solid footing of gold.

15. Not many months had passed before the saturation of the currency with legal tender paper and silver was proved by the slackening of gold payments for customs duties. In the spring of 1893 the new coin notes outstanding had risen to \$140,000,000, and the increase then going on was not far short of \$4,000,000 per month; gold receipts at New York were nearly dried up, and the gold reserve in the Treasury was falling below the prescribed \$100,000,000. The visible danger of the suspension of gold payments precipitated the violent monetary panic which culminated in July. Congress was called together in August to provide the means of financial safety, and the repeal of the clause in the act of 1890 requiring the purchase of silver was carried, after a parliamentary contest which lasted for eighty-two days (1893, ch. 8).

These are the leading points in the history of a currency now old enough to have had its trial in every variety of national fortune,—in prosperity and in adversity, in war and in peace. As an exhibition of unsteady purpose, the record appears to me to be without a parallel, considering the gravity of the subject-matter. This is the manner in which the nation has dealt with the paper legal tender which practically lies at the base of the great mass of its credit transactions,—used concurrently with gold no doubt at present, but for many years used almost exclusively, and possibly in some contingency destined to

be so used again. The customary paper circulation, which should rest on a bed-rock of law as unchangeable as anything of human institution can be, has lain upon a quicksand. Instability has been the leading characteristic of our legislation on this subject for a third of a century.

If we consider the course pursued by the other leading nations in their management of currency and kindred matters, the contrast is remarkable. England has made no important change in her currency system for over fifty years, and, notwithstanding the inviting field which it presents for the reformer, still prefers not to risk her reputation for absolute safety upon possible, but still uncertain, improvements. France has kept her system without substantial change, except in the scale of its operations, ever since the absorption of the departmental banks by the Bank of France in 1848. The war with Germany, suspension of specie payments, revolution, invasion, and defeat tried the strength of her legislation and of her confidence in it; but it stands to-day nearly as it stood before 1870, except for the legal tender power then given to the notes of the Bank of France. Germany laid her course in her coinage and bank acts of 1871 to 1875, and has followed it from that day without deviation, her occasional legislation upon this subject being directed steadily to the completion of the system as originally planned. These nations now have an unfailing confidence in the steadiness, permanence, and soundness of their own monetary arrangements; and a chief element in that confidence is the certainty that serious change is not within the range of probability.

This contrast, though still disadvantageous, would be less painful if in the rapid succession of changes made by our government there were discernible any approach to continuity of purpose. A consistent policy might be developed or a system might grow up by a succession of short stages, and the wisdom of the process might be jus-

tified as regards its intention, if not as regards its skill. But no such continuity is to be found in the series of measures recapitulated above. Fundamental principles are adopted at one time and abandoned at another. The automatic absorption of notes by bonds, their systematic retirement and cancellation by the discretionary authority of the Treasury, the payment of them as a debt, the idea of fixity of amount, and that of an adequate reserve in proportion to the amount,—such conceptions as these have been held for a time, then dropped, and succeeded by others, perhaps equally short-lived. The series of acts, as a whole, points to no particular end, its several parts have no systematic tendency or common direction. The steps taken have been without logical order, and the important consequences following have often been neither expected nor desired. The line traced by these measures is in fact a legislative zigzag, not a line of development.

When we inquire for the cause of such a mortifying result from thirty-five years of constantly renewed financial anxiety and debate, we must find it in the general absence of any sense of responsibility for the formation and maintenance of a consistent policy. Not many of our Secretaries of the Treasury have found it worth while to plan and act for any distant future, they knowing well that executive initiative counts for but little in the end; and, moreover, whatever secretaries may desire, no Congress can be relied upon to carry out the purposes of a predecessor. Inspection of the list of acts shows that usually some accidental conjuncture or some supposed popular demand has been the real spring of action in each case, and that for the individual legislator a supposed mandate for the passing moment has generally been enough to discharge him from all personal responsibility.

Consistency in the popular demand is not a characteristic of our politics. The American people can be relied upon with confidence in a sufficiently alarming crisis,

finally and after great travail, to rally in support of the honest and wise course in any matter of high policy; but this result is often reached only after a season of painful doubt and seeming vacillation, and after much mischief. The last year, for example, witnessed the latest of a series of occasional appeals to the sound common sense of the plain people, in which the result was fortunate, to be sure, and emphatic, but was obviously too long left in uncertainty. How should we expect the sense of legislative responsibility for a continuous course of action to be developed under such conditions? How can we wonder that the congressman is too anxiously mindful of the shifting mass of opinion behind him, on which his political future depends, to resist the passing demand for change? Or why should our financial legislation be less changeable and inconsistent than our tariff legislation, in which we are now expecting the third radical alteration, not to say revolution, effected in the space of seven years?

Is it even surprising that, on the whole, the net result of conflicting financial acts should be a general weakening of our system and a loosening of the grip upon hard money? The fact is indubitable. For proof of it we need only compare, first, the condition of things in 1865, when there was a general consensus of opinion that the return to specie payment was a manageable problem for early solution; second, the condition in 1875, when, after a year of painful tergiversation, a Resumption Act was finally carried through in deference to a manifest public opinion, although by means of an agreement that its terms should be unintelligible; and, third, the recent state of affairs, when the country has repeatedly found itself brought dangerously near the verge of a fresh suspension, and has still found it impossible to obtain a line of legislation demanded for the better protection of the national honor and well being. The reason for this irregular, but on the whole progressive, relaxation on the side of political

morals, at the same time that we have secured specie payment, is not far to seek. In any debate where the fateful words "contraction" and "relief" are heard, the fears and demands of a sufficiently noisy minority have extraordinary potency, especially in the even years which witness the national elections; and ground once lost by any weakness in this part of the field of politics is regained with great difficulty. The country is now and then roused to the fact that it is slipping down a dangerous declivity; but, after all, even under a government of and for and by the people, it is not always easy for the clear will of the majority to find expression in law.

It is not to be assumed that the cause of this legislative incapacity to deal firmly with a subject of the gravest importance is to be found in special defects of character, intellectual force, or proper purpose among the men who make up the Congress of the United States. The parliamentary bodies in other countries as well as our own suffer from the follies of individual members, often fail to do their duty, and are the objects of criticism and satire. Under their forms of parliamentary government, however, they are in a measure protected from what might prove to be their own incapacity,—sometimes by traditional modes of procedure, sometimes by positive rules, and generally by established forms of political organization and leadership. Without the defences of this kind which time and habit have thrown around the House of Commons, that body might easily find its action as much a matter of chance, and as little to be relied upon under the strain of an unsettled public opinion, as that of the House of Representatives. Add to the differences in customary procedure the fact that it is our usual practice to elect to Congress no one who is not a resident of the district to be represented,—so that disagreement with local opinion often means for the member not merely failure at a new election, but polit-

ical death,—and there are reasons enough why Congress should have failed so conspicuously to frame and defend any consistent line of policy as to the paper currency.

A few words should also be said here as to a phase of popular opinion with which members of Congress have long had to reckon,—a phase of opinion singularly persistent and general, showing itself in an extreme dread of “contraction.” The long depreciation following the great issues of United States notes during the war impressed upon the public mind the consequences of inflation, so deeply that the lesson is nearly as vivid to-day as it was thirty years ago. The majority, no doubt, have a wholesome dread of any tendency in that direction; and a minority, perhaps, desire such a tendency in some form or other, with more or less crude notions as to controlling the results. But, whether resisting inflation or favoring it, the great mass of our people clearly have a strong belief in the effect of quantity upon the value of a circulation; and this appears to make up the greatest part of their simple creed as to money. To hold the currency where it is becomes the ideal of steady management; and contraction becomes an evil in itself, and perhaps more dreaded even than inflation, because its earlier stages are more painful.

The dread of contraction was the one argument against resumption which had any strength with the public; and it has not lost its power since, although we plainly have the whole world upon which to draw, if our own supply is below our needs. A morbid anxiety as to the sufficiency of the currency to-day possesses the public mind, as is shown by the copious statistics with which the government publications constantly strive to reassure the people, and by the frequent efforts of Presidents and Secretaries to satisfy public opinion as to the care with which the supply of currency is insured. No other country of importance shows this hypochondriac anxiety as to its symptoms, or gives a tithe of the attention given by ours to the

mere quantity of its money; and no one of the leading commercial countries, it must be said, is either so favored by fortune or so constantly in trouble in this respect. But our excessive sensitiveness on this point is obstinate: it has apparently been increased by the course of the discussion as to silver, and we are still absolutely unwilling to trust to the operation of natural laws for the adjustment of the amount of our active currency.

The necessary conclusion from our experience with the legal tender notes plainly is that a government currency, under our conditions, is an unfit subject for national legislation. Many subjects required legislation in the heat of civil war, which are recognized as having no place in time of peace; many powers were then called into use from stern necessity, which have been laid aside, like disused weapons consigned to the arsenal. A system which makes the usual legal tender of the country a subject of current legislation risks too much upon the chances of mistake, attack, and uncertainty. It is a familiar and useful practice in our legislative bodies to recognize some subjects as fitted for treatment by general laws, in order that they may be freed from the uncertainties and may not add to the temptations which beset the work of every legislature. The case of the paper currency of the country is analogous to this, in that for safety it requires to be placed upon such a basis as shall reduce to the minimum the chances of its coming up for action and shall prevent a constantly recurring anxiety as to its future.

What happens with a paper legal tender is far different from the course of legislation as to the legal tender coin. With regard to the latter the government fixed its standard and established its system of coinage in 1792, and then found at the most only two occasions for legislation as to other matters than mere detail, until the silver question presented itself in 1878. But the paper legal tender

never has been, and it is safe to say never can be, put upon a basis where it can have a like course of freedom from change. Resting purely upon credit, and regarded as a creation of money by mere act of Congress, it steadily invites alteration, the removal of this limit or that, the increase of its amount, or the alteration of its coin basis. The reserve to be held in the Treasury under any safe adjustment can never fail, from its magnitude, to attract the covetous gaze of the schemers who throng around the great source of government bounty. In addition to these risks to which the paper legal tender is exposed, it has also to meet those arising from the silver controversy and now threatening the coin. It was well recognized six months ago that in the event of Mr. Bryan's election the legal tender paper might be suddenly lowered to the silver standard, by the mere substitution of silver redemption for gold, and by mere executive order. It is not fit that the paper currency of the country should thus be kept adrift, or that the people of the country should be called upon periodically to rally for the safety of something which fails of one of its main purposes, if it is not kept free from any suspicion of danger.

The passage of the Silver Purchase Act of 1890 is a striking illustration of the peril of the present situation. Two explanations have been given of the causes which united a majority of both Houses in favor of an act which proposed a steady dilution of the paper currency, involving the ultimate suspension of gold payments and final degradation of our standard to the level of silver. One explanation, current at the time and long afterwards, was to the effect that a majority of both Houses favored the free coinage of silver, that President Harrison could not be relied upon to veto a bill framed for that purpose, and that the insane "experiment" of buying the domestic product of silver by new issues of paper annually was resorted to as a compromise, in dread of a more rapidly

working measure and one which would leave no *locus penitentiae*. The other explanation—given in the Senate nearly a year ago by Senator Teller—was to the effect that the Silver Purchase Act was the consideration for which the silver interest, holding the balance of power in the Senate, was induced to give its support to the Tariff Act of 1890, then on its passage. This statement of the transaction, made by one who did not hesitate to declare himself one of the contracting parties in the case, has the greater intrinsic probability; but, be that as it may, let the one account or the other be the correct statement, it is true in either case that legislature and executive were alike ready to cut the paper currency adrift from the solid standard and to let it float towards depreciation. In the one case this would be for the reason that a sound currency was doomed in any event; and in the other case for the reason that neither Congress nor President regarded its sacrifice as anything more than a proper makeweight, to be thrown in for the sake of securing a higher scale of customs duties.

Is there another country in the world, outside of South America, in which a paper legal tender, with all the possibilities implied in its misuse, would be dealt with in this fashion? The election of 1896 and all that has followed inspires confident hope of a less troubled future; but, after all, what guarantee have we that the amazing defection of 1890 may not be repeated within half a dozen years? Such an untoward result would mean no greater revolution than that which took place in the half-dozen years ending with 1890: indeed, it may be doubted whether in the minds of most men the assurance of safety is not sensibly weaker now than it was before that year.

The case of 1890 shows the peril that may come from positive action by Congress, and the last three years have shown with equal distinctness the dangers to be feared

from its inaction. Since the beginning of 1894 there has been a necessity for the periodical replenishment of the gold reserve. Withdrawals, sometimes for export and sometimes from precaution, have brought the stock of gold down to the danger point; and it has been filled up by the proceeds of successive loans, amounting to over \$260,000,000. It is immaterial whether the cause of this steady borrowing for the payment of a debt which is not thereby diminished, is to be found in what has been called the "endless chain" of notes redeemed, reissued, again redeemed and again issued, or is to be found in a deficiency of revenue. In either case the evil was flagrant, and it was the business of Congress to apply an appropriate remedy,—by fresh taxation in the one case, or by modifying the system of reissue under the act of 1878 in the other. But it will be within the recollection of every reader that Congress found itself absolutely unable to act. Four times the necessity for borrowing has presented itself, with a suspension of gold payments as the only alternative. On three occasions out of the four Congress was in session at the critical moment; but it uniformly appeared that action was out of the question. Grant that the responsibility for failure lay with a factious few and not with the majority, and the fact still remains that the Congress of the United States was unable to act in an emergency created by its own legislation. It was even unable to apply the palliative of providing for the issue of shorter bonds, bearing a lower rate of interest than those to be issued under the act of 1870, a bill for that purpose passed by the House in 1896 having been converted by the Senate into a bill for the free coinage of silver. For three years, therefore, the credit of the government and the standard of prices and payments have remained, not without defence,—for the executive still performed its duty with the means afforded by the half-forgotten provision in the Resumption Act,—but so

shaken at intervals as to cause constant dread, sometimes nearly degenerating into panic.

A currency which is exposed to such dangers as these cannot be called safe in any proper sense of the word. The wealth of the promissor of the note is unspeakable, but from time to time the application of that wealth in fulfilment of the promise is not beyond question. The power to enforce the legal tender of the note at its face in payment of debt is absolute, but the standard of its value has never been made secure. For thirty-five years the policy of the law in regard to this currency has been uncertain, and the causes of this uncertainty have gained in strength and multiplied as time has gone on. One ingenious expedient and another is suggested for regulating the use and redemption of the notes, in the hope of giving them steadiness and securing somewhere a power of control; but there is no escape from the fatal objection, that the direct power of legislation is not only paramount but is beyond the controlling force of any steady political influence. In short, not only is there no guarantee, but there is no probability that the history of these issues, if they continue for another generation, will be any less checkered than it has been in the last. Without dwelling upon such forebodings, however, it is enough to say here that, while the very foundation of all credit is thus left doubtful, neither the credit of the nation nor that of the mass of its citizens can reach its proper strength. None can profit by such uncertainty except those whose command of wealth enables them to secure themselves, at the expense of others, against the hazards of the future.

The necessary alternative to the issue of paper currency by the government is the delegation of this function to banks and the complete substitution of private credit for public as the medium of exchange in domestic operations. A large proportion of these operations are already per-

formed by means of bank credit, with an adjustment to the needs of the day which is nearly automatic; and the only relief from the increasing perils of the present situation is to be found in the same direction. This reliance upon banks would not, necessarily, mean the absorption of the whole right of paper issue by the national banks, although this absorption would have much to recommend it; but it would clearly imply the confinement of the right to banks working under tolerably uniform conditions, as the guarantee of their safety and wide credit, and therefore presumably under some kind of national regulation and supervision.

Even with the use of bank-notes, then, the paper currency must continue to be a subject of national legislation. There is, however, an important distinction in the kind of legislation called for by government paper and by bank paper respectively, and a great difference in the risks to which we may be exposed in the two cases. Congress has had the national bank system before it, for any necessary legislation, for almost the same length of time as the legal tender issues; but the course of action in the two cases offers no point of resemblance. Inconsistent and essentially weak as the dealing of Congress with the legal tender issues has been, its legislation as to the banks has on the whole been marked by steady purpose, has tended to complete the original system, and as a general result has materially strengthened it. Deservedly or not, the banks have from the start had abundance of enemies, in Congress and out of it; but the bank legislation if not uniformly wise, has been sparing in amount and usually directed to the details rather than the general structure and credit of the system. Comparison shows clearly that for thirty odd years the legislator has approached bank questions from an entirely different point of view and in a different frame of mind from that which has led him to such unfortunate results in acting upon legal tender

notes. He has not felt the same temptations, he has not been under the same outside influences, the pressure of the times has not turned his thoughts in the same direction. The fundamental difference in the two cases is no doubt explained by La Rochefoucauld's familiar maxim, "that it is easier to be wise for others than to be wise for one's self." The legislator has found it congenial and easy to hold others to the strict line of their obligations and of sound public policy, but not so easy to observe this line in deciding as to what lay within his own hand. His greatest folly in dealing with the banks — the absurd attempt, made by Congress in 1881 and foiled by the veto of President Hayes, to force a reduction of the interest of bonds held by the banks — was after all not a measure of relaxation towards them, but one of severity.

This natural tendency of Congress, considered merely as a collection of human beings, to exact more from others than from themselves, is undoubtedly strengthened by the kind of presumption established in the popular mind to the disadvantage of any corporation, in questions of responsibility or of seeming conflict of interest. The national banks have felt the pressure of this influence against them, in cases where they have sought for changes of legislation which would have been for the general advantage. No doubt in such cases impartiality of judgment would better have befitted the legislator than unfavorable prepossession; but, after all, can it be doubted that the disposition to say "No" has had an important place among the causes for the general steadiness of our bank legislation? To hold the banks to their obligation and to grant them few favors has been the rule, and the existence of any rule analogous to this in dealing with the legal tender issues would have given an entirely different cast to that unfortunate chapter of our history.

The nations already referred to as able to manage their currencies successfully and quietly have all done this by

delegating the power of issue to banks. They have established their banks on different principles, but have agreed in the general policy of throwing upon them certain duties and restricting the field of probable legislation. That their systems have a remarkable steadiness and permanence has already been pointed out. These systems they also strengthen as time goes on, not so much by legislation as by practice, by public opinion, and by the establishment of traditions of duty on the part of the banks themselves. Both in England and in France the legislative power takes distinctly the attitude of observation, towards an establishment which is conducted for private profit, but is intrusted with a *quasi* public function. In Germany the imperial control of the Reichsbank makes the relation somewhat different, and yet a note circulation of remarkable stability has been built up there on the basis of private capital invested in order to earn a profit.* In neither one of the three countries does the regulation of the currency present itself as a subject for ordinary legislation.

But it is not necessary for the present discussion to enter upon the general considerations for or against a paper currency consisting of bank notes alone; and I shall only call attention here, in conclusion, to the often-repeated argument that a government issue, being a loan without interest, results in a saving to the Treasury which is lost when the right of circulation is delegated to banks. The experience of the United States in the last five years alone presents a complete answer to this penny-wise reasoning. In that space of time the people of the United States have lost by shaken confidence, discouraged enterprise, and the actual ruin of thousands of citizens, result-

* There are still outstanding in Germany imperial treasury notes (not made a legal tender) to the amount of 120,000,000 marks, remaining from the larger issue made in 1875 to replace the notes of the several German States. But this exception to what is said above is not important.

ing from the mismanagement of their currency, an amount beyond all comparison with the annual saving of perhaps \$12,000,000 made by them at the Treasury. The thrill of alarm which runs through the country whenever the gold reserve dips too far below the line, or when there is delay or doubt in applying the costly remedy, means a loss to the people to be measured only by scores of millions. The monetary panic of 1893 alone, by its direct results and without reference to the stagnation which followed it, was enough to counterbalance all savings of interest made by the Treasury in the last twenty years.

But the question as to the means of securing the safest paper currency is one in which the consequences to the national industry and prosperity are on a scale so vast that any attempt at pecuniary measurement appears irrelevant,—as irrelevant as it would be to draw from the post-office deficit a conclusion as to the maintenance of the postal service by our people. No such calculations are needed to show that our people cannot afford to rest content with a system which their experience for a generation has shown to be radically unsafe. So long as such a system continues, its history must continue to repeat itself. Errors made in the past will be made also by the new men in the future; and the possibility that, in any moment of popular discouragement or passing delusion, some fresh experiment or abandonment of wholesome limitation may be resolved upon in haste, but with irreparable results, must continue to be a standing menace to our credit, public and private.

CHARLES F. DUNBAR.

THE BIRTH-RATE IN MASSACHUSETTS, 1850-90.

FOR a statistical study of births the exact meaning of birth-rate must first be agreed upon. The birth-rate in its usual sense means the ratio between the number of people living in the middle of a year and the number of births occurring among them in the course of that year. It is ordinarily stated in terms of so many births for each thousand of the total population. But large classes of the population are rendered by youth or age physically incapable of contributing to its births; and other large classes, whose age is no barrier, are unlikely to do so because they have not formed a marriage relation. Hence the total population is an unsatisfactory basis of comparison. The best method would be to divide the births into the two classes of legitimate and illegitimate, and to compare the former with the number of married couples, both members of which were of reproductive age, and the latter with the number of unmarried persons of reproductive age. But the limits of this age among men are more variable and indeterminate than among women. Hence it has become customary to compare the births of each class with the number of married or of unmarried women of reproductive age. While this assumes that each such married woman is married to a man of reproductive age, the error arising in consequence probably is negligibly small.

The crude birth-rate, then, is the number of births annually to each thousand of total population. The accurate legitimate birth-rate is the number of legitimate births to each one thousand married women of reproductive age. The accurate illegitimate birth-rate is the number of illegitimate births to each one thousand unmarried women of

reproductive age. The limits of reproductive age among women are assumed in this paper to be fifteen and fifty.

For statistical purposes a birth may be defined as the delivery of a viable child. Practice differs somewhat in determining what shall constitute a still-birth. A child of viable age that is dead before or at birth is uniformly considered to be still-born; but in some countries a child that dies within one, two, or three days after birth is counted among the still-born. From the statistical point of view the still-born are generally considered apart, and are not classed either as births or as deaths.

The study of statistics of births divides itself into two main branches. We may study, first, the relations of various categories of births to each other; and, secondly, the relations of births to other phenomena, as marriage, death, prosperity. Under the first head, births may be classed as male or female, legitimate or illegitimate, living or still-born. All these distinctions are made in the registration reports of Massachusetts, upon which this study is based. It will be convenient to consider, first, some of the facts as to the cross-divisions among births, and to proceed then to the general birth-rate.

The normal excess of male births over female, first pointed out by Graunt in 1662,* and more completely demonstrated by Süssmilch in 1741,† appears again in Massachusetts. Süssmilch found the excess of boys to be as 21 to 20. Later investigation has shown that the ratio varies somewhat in different countries. But, in general, the range is slight; and most countries would be included in a range extending from 104 to 106 boys (both figures included) to 100 girls.‡ Massachusetts forms no exception. Of the total number of living births regis-

* *Observations on the Bills of Mortality*, 4th edition, pp. 93-98.

† *Die göttliche Ordnung*, edition of 1775, vol. ii. pp. 241-284.

‡ See Newsholme, *Vital Statistics*, p. 62; and Bertillon, *Traité de Démographie*, p. 196.

tered in the State during the period 1850-90, there were 105.56 boys to every 100 girls.*

The discovery of this remarkable regularity in the proportion of the two sexes at birth is an achievement of the statistical method in its simplest form. It never could have been discovered by personal observation of individual families. Statistics has revealed the law: can it furnish an explanation?

The first attempt to explain this phenomenon by statistical investigation was made by Hofacker, a German, in 1828. Two years later, but quite independently, Sadler, an Englishman, investigated the same subject. Both arrived at the same conclusion; namely, that "the proportion in which the sexes are born is governed and regulated by the difference in the ages of their parents, in such manner that on the average, among the total of the births, the sex of that parent shall exceed in number whose age exceeds."† The husband is usually older than the wife, hence the excess of males among births. They found also — and later investigation bears them out — that in the great majority of countries the excess of males among illegitimate births is considerably less than among the legitimate births. In Massachusetts, in the period 1854-90, among the illegitimates whose sex was distinguished, there was an almost equal number of boys and girls, the proportion of boys to girls being as 100.75 to 100. The Hofacker-Sadler theory explained the smaller excess of male births among illegitimates on the ground that the parents of illegitimate children are, in general, more nearly of the same age than are the parents of legitimate children.‡

This explanation of the excess of male births by reference to the relative ages of the parents has been ques-

* Total births, 1,632,294: males, 836,686; females, 792,574; sex unknown, 3,034.

† Sadler, *Law of Population*, vol. ii., Book IV., chap. iii.

‡ *Ibid.*, pp. 337-339.

tioned, and certainly has not yet been sufficiently tested. Other theories have been advanced, one of the latest being that of Düsing,* who seeks an explanation of the phenomenon in biological causes. He thinks that the relative age of the parents does not exert so great an influence upon the proportion of the two sexes at birth as the relative distance of the two parents from the period of their greatest reproductive power. The probability of a boy birth is much greater when the mother is nearest that period, and the father is considerably removed from it. Most marriages occur when both parties are past this point; and, as the husband is considerably older than the wife, there results an excess of boys at birth.

Other factors also are discussed by Düsing. Thus a long delay between the first and second birth is likely to result in an excess of boys among the second births. Females are more sensitive to a deficiency or excess of subsistence than are males; and there is said to be a tendency to a large excess of male births in years of adversity, and *vice versa*. For the same reason, among the first-born, and among children born of mothers who are in advanced age,—since such mothers are not apt to provide good nourishment,—a large excess of boys is likely to occur.†

Another fact of importance in considering the problem of an excess of males at birth is that among the still-born the excess of males is much larger than among the living-born. This phenomenon has never been explained satisfactorily; and it seems to be connected with the higher infant mortality of males, which is itself unexplained. The still-born recorded in Massachusetts (1850-90) numbered 47,790, a number equal to 2.93 per cent. of the living-born. Of these, 3,918 (8.2 per cent.) were re-

* Düsing, *Die Regulierung des Geschlechtsverhältnisses bei der Vermehrung der Menschen, Thiere und Pflanzen*, 1884.

† See Bertillon, *Traité de Démographie*, p. 197.

turned as sex unknown. Of the remaining there were 146.47 males to every 100 females.*

The following table shows the proportion of males born in Massachusetts to every 100 females for each five-year period since 1850. The still-born are included:—

TABLE I.

<i>Periods.</i>	<i>Proportion of Males to 100 Females.</i>	<i>Periods.</i>	<i>Proportion of Males to 100 Females.</i>
1851-55 . . .	106.84	1871-75 . . .	106.81
1856-60 . . .	106.26	1876-80 . . .	106.52
1861-65 . . .	107.73	1881-85 . . .	106.18
1866-70 . . .	106.53	1886-90 . . .	105.75

The table seems to suggest that in periods of great adversity the excess of males may be above the average. The most striking instance is that of the Civil War, for in that period the excess of males reached its highest point. During the last twenty years there has been a steady decline in the excess of males.

On the whole, it may be said that, while no theory attempting an explanation of the excess of boys at birth has been sufficiently tested and proved, the attempt to explain the phenomenon from biological causes is most promising. In this attempt investigators may get valuable clews, as they have done and are doing more and more, from data furnished by social statistics.

The Massachusetts Registration Report for the year 1854 was the first to distinguish illegitimate births. For the period since 1854 I have calculated the number of illegitimates to every 1,000 living births. This method is not the most scientific; but it is the best available for the study of the illegitimate birth-rate for the whole period. After 1875 a more accurate method is possible, as comparison can then be instituted between the number of ille-

* Compare with Mayr, *Die Gesetzmässigkeit im Gesellschaftsleben*, pp. 249, 250.

gitimates and the unmarried females aged fifteen and above. The illegitimate birth-rates as thus computed show a general though irregular increase of illegitimacy in Massachusetts.* Part of this apparent increase is undoubtedly due to more complete registration. The entire increase, however, can hardly be explained in this way; for there has been a marked increase since 1880, and there is no reason to suppose that the returns were much more complete in 1890 than in 1880. It is probable that this increase in the illegitimate birth-rate is related to the diminution in the marriage-rate. Causes which tend to make marriage difficult exert an influence upon the number of illegitimates. While in Massachusetts the laws restricting marriage are not stringent, and the economic condition of the parties forms no legal objection to marriage, changed economic and social conditions have made marriage more difficult.† This accounts in part for the higher illegitimate birth-rate. It would be interesting to know whether illegitimacy is more prevalent in the urban than in the rural districts of Massachusetts, and the relative amount of illegitimacy among the foreign-born and the native population. Information on these points would doubtless throw more light upon the apparent increase of illegitimacy in late years. The registration reports, however, do not make the distinctions necessary for such an inquiry.

We proceed now to a consideration of the birth-rate as a whole. From data to be found in the Massachusetts censuses and in the United States censuses, we can compute the birth-rate according to three methods, of varying degrees of accuracy. The number of births may be compared: (1) with the total population; (2) with the total

* See Table II., columns 6, 7, and 8.

† See a paper by the present writer on *The Marriage Rate in Massachusetts, 1850-90*, in *Publications of the American Statistical Association*, December, 1895.

TABLE II.

BIRTH-RATES IN MASSACHUSETTS, 1850-90.

(The figures in italics are the maxima and minima.)

1	2	3	4	5	6	7	8
YEARS.	Living births.	Rate per 1,000 total population.	Rate per 1,000 adult population.	Rate per 1,000 females aged 15-50.	Illegitimate births.	Illegitimacy to 10,000 living births.	Illegitimacy per 1,000 unmarried females over 15.
1850	27,664	27.8	40.6	97.2			
1851	28,861	28.2	41.4	99.1			
1852	29,802	28.3	41.8	100.0			
1853	30,920	28.7	42.5	101.5			
1854	31,997	28.9	43.0	102.8	203	63.4	
1855	32,845	29.0	43.3	103.3	186	56.6	
1856	34,445	29.9	44.5	106.1	257	74.6	
1857	35,320	30.1	44.7	106.8	242	68.5	
1858	34,491	28.9	42.8	102.0	293	85.0	
1859	35,442	29.2	43.1	102.8	237	66.9	
1860	36,051	29.3	43.1	102.6	294	81.5	
1861	35,445	28.6	42.0	99.0	290	81.8	
1862	32,275	25.9	38.0	88.5	247	76.5	
1863	30,314	24.1	35.4	81.6	277	91.4	
1864	30,449	24.1	35.3	80.5	285	93.6	
1865	30,249	23.8	34.9	78.6	271	89.6	
1866	34,085	26.0	38.0	87.1	281	82.3	
1867	35,062	26.0	37.8	88.1	292	83.3	
1868	36,193	26.1	37.9	89.4	366	101.1	
1869	36,141	25.4	36.7	87.8	286	79.1	
1870	38,259	26.2	37.6	91.5	285	77.4	
1871	39,791	26.5	38.1	92.5	432	108.6	
1872	43,335	28.1	40.2	97.8	303	70.1	
1873	44,481	28.2	40.2	98.0	587	109.5	
1874	45,631	28.2	40.1	97.9	648	142.0	
1875	45,996	26.6	38.5	92.0	632	143.7	2.16
1876	42,149	25.1	35.4	86.8	713	169.2	2.37
1877	41,850	24.5	34.6	85.0	697	142.7	2.26
1878	41,238	23.8	33.5	82.3	640	155.2	2.02
1879	40,295	22.9	32.2	79.2	716	177.7	2.20
1880	44,217	24.8	34.7	85.7	778	176.0	2.34
1881	45,220	24.9	34.8	85.8	801	177.1	2.35
1882	45,670	24.7	34.4	84.9	865	189.4	2.48
1883	47,285	25.1	34.8	86.1	899	190.1	2.52
1884	48,615	25.3	35.1	86.8	894	183.9	2.45
1885	48,790	25.0	34.5	85.4	903	185.1	2.42
1886	50,788	25.3	34.8	86.2	1,034	203.6	2.69
1887	53,174	25.7	35.3	87.6	1,157	217.6	2.92
1888	54,893	25.8	35.3	87.9	1,059	192.9	2.60
1889	57,075	26.1	35.6	88.9	1,045	183.1	2.49
1890	57,777	25.8	35.0	87.6	1,206	208.7	2.80

adult population; and (3) with the total number of females of reproductive age. The rates determined by these three methods fluctuate in general in the same direction.*

Is the birth-rate diminishing in Massachusetts? Considering the general trend of the birth-rate for the last four decades, the answer must be in the affirmative. The birth-rate per 1,000 females aged fifteen to fifty years was 9.9 per cent. lower in 1890 than in 1850. The crude birth-rate was 7.2 per cent. lower, and the rate based upon the adult population was 13.8 per cent. lower, in 1890 than in 1850. This diminishing birth-rate in Massachusetts has been coincident with a diminishing marriage-rate.

Dr. Billings has pointed out that this tendency to a diminishing birth-rate is general in the United States as well as in Europe.† His conclusions, so far as the United States are concerned, are based upon the data contained in the tenth and eleventh censuses. These data are admittedly incomplete; but the assumption is made that the census returns are deficient in about the same degree for 1880 and for 1890. He calculates that the birth-rate in the United States was 4.27 less per 1,000 population in 1890 than in 1880, and that during this decade there was a decline in the birth-rate of all the States and Territories excepting Arizona, Colorado, Montana, and New Mexico.

There is some reason to doubt whether the decline in the birth-rate was as marked as Dr. Billings's figures would indicate. The following table is a comparison of his figures with those of the registration reports of four States. For Massachusetts, Rhode Island, and Michigan, where the births are registered by months, the computation has been based upon the births registered during the census year,—June 1 to May 31. For Vermont the rate, necessarily computed from the registered births for the

* See Table II., columns 3, 4, and 5.

† *The Diminishing Birth-rate*, in the *Forum*, June, 1893.

calendar year, has been compared with that from the enumerated births for the census year,—a much less trustworthy method.

TABLE III.

BIRTH-RATES FOR CENSUS YEARS.

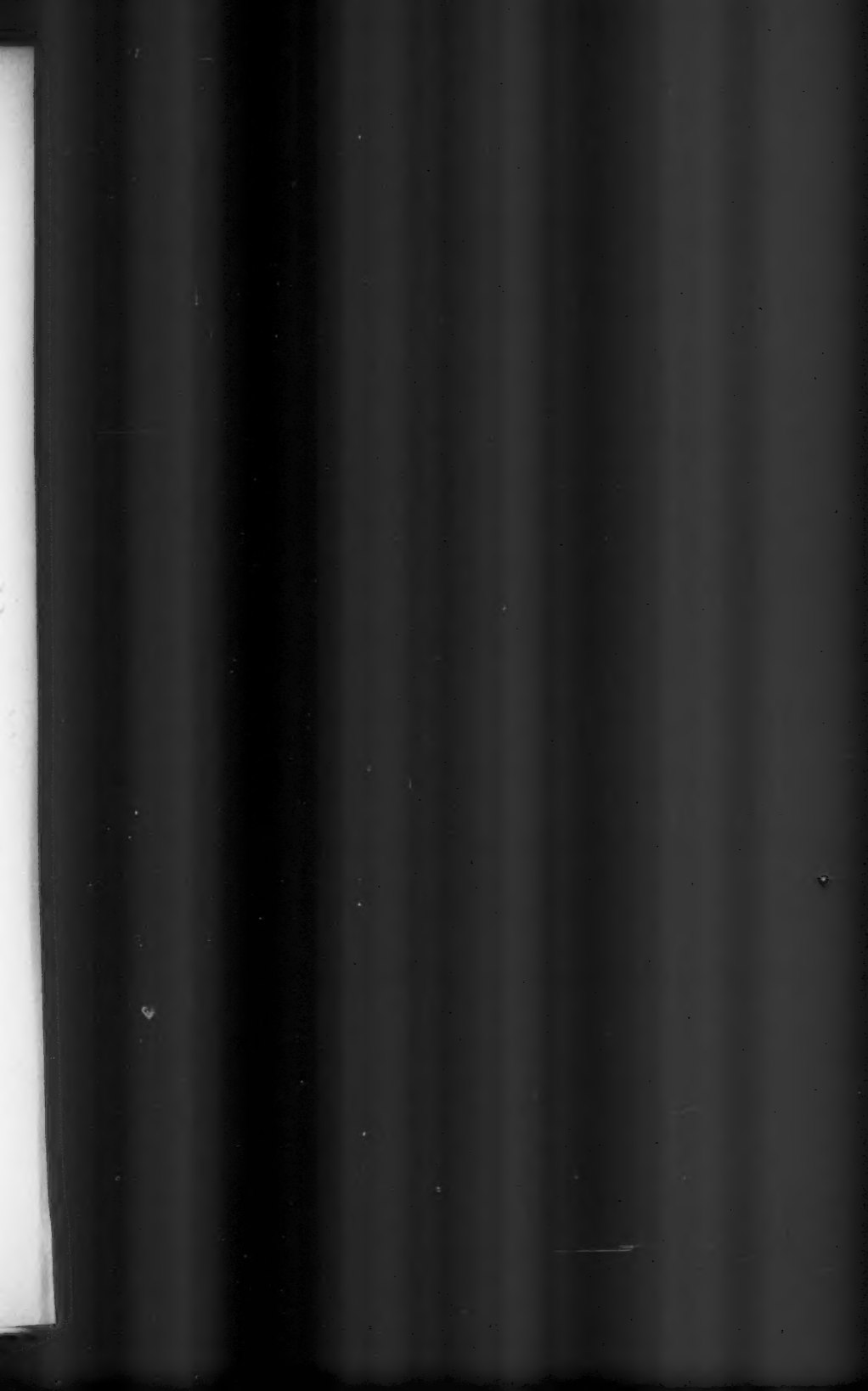
	<i>Dr. Billings's Figures.</i>			<i>Registration Figures.</i>		
	1880.	1890.	Change.	1880.	1890.	Change
Massachusetts. .	23.18	21.51	—1.67	24.00	26.18	+2.18
Rhode Island . .	23.88	23.38	—0.50	23.58	24.31	+0.73
Vermont . . .	21.71	18.51	—3.20	20.50	19.40	—1.10
Michigan . . .	27.64	24.80	—2.84	21.06	24.69	+3.63

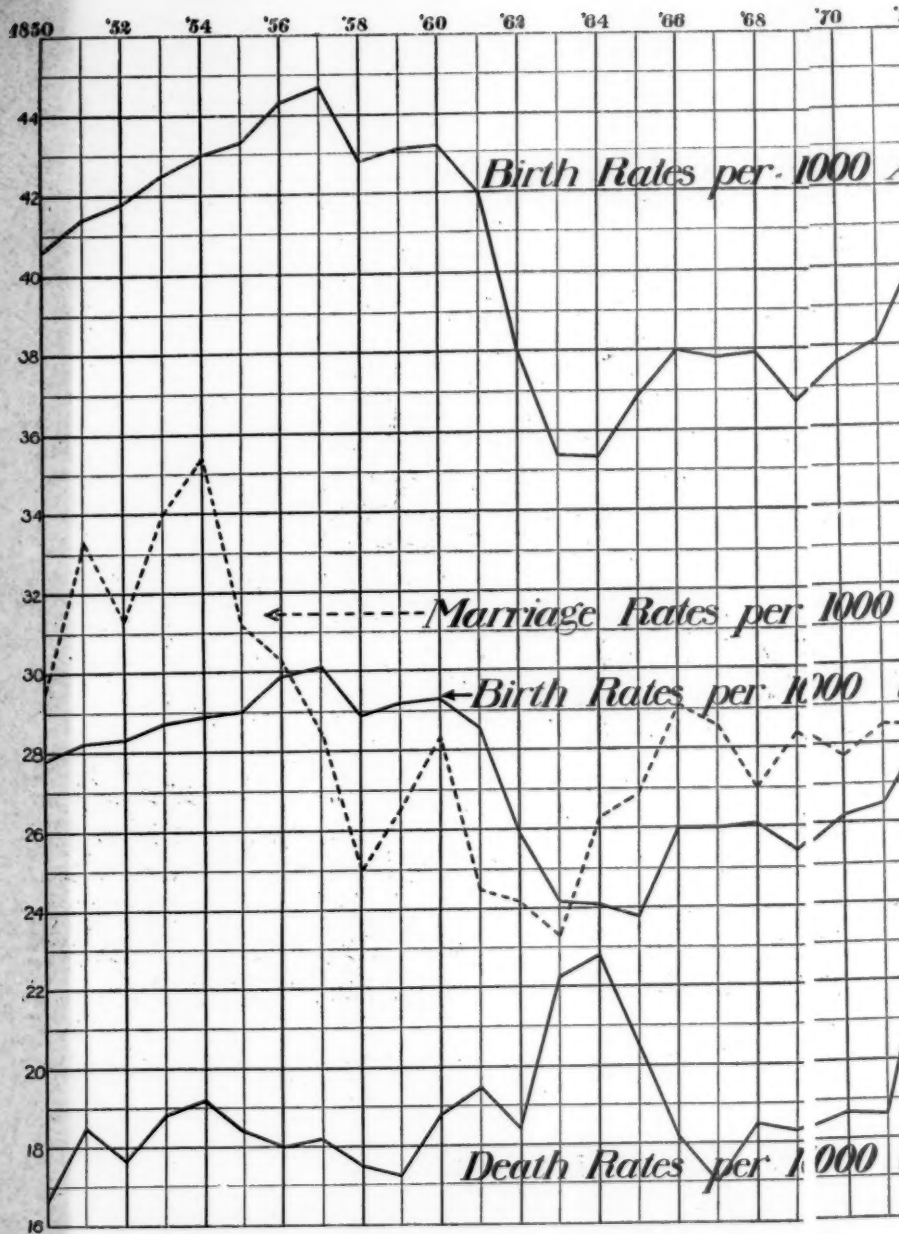
As the registration figures are probably more accurate than those of the census, and as the results are quite different, it seems justifiable to question the census returns, or at least to suspend judgment until the greater trustworthiness of the census results is clearly shown. In three of the States the registration returns show a higher birth-rate in 1890 than in 1880, while in Vermont the decrease is considerably less than Dr. Billings's figures would indicate.

The following table gives the crude birth-rate of Massachusetts and several foreign countries for the last four quinquennial periods:—

TABLE IV.

	1871-75.	1876-80.	1881-85.	1886-90.
Massachusetts	27.5	24.2	24.4	25.7
England and Wales . .	35.5	35.4	33.5	31.5
Scotland	35.0	34.8	33.3	31.4
Ireland	27.2	25.8	23.9	22.8
Denmark	30.8	32.0	32.5	31.6
Norway	30.2	31.5	30.9	30.4
Sweden	30.7	30.3	29.4	29.0
Austria	39.5	38.8	38.3	37.7
Switzerland	30.1	31.3	28.7	27.4
Belgium	32.2	31.9	30.7	26.3
France	25.5	25.9	24.7	23.0
Prussia	38.9	39.2	37.4	37.3
Italy	36.7	36.8	37.9	37.6





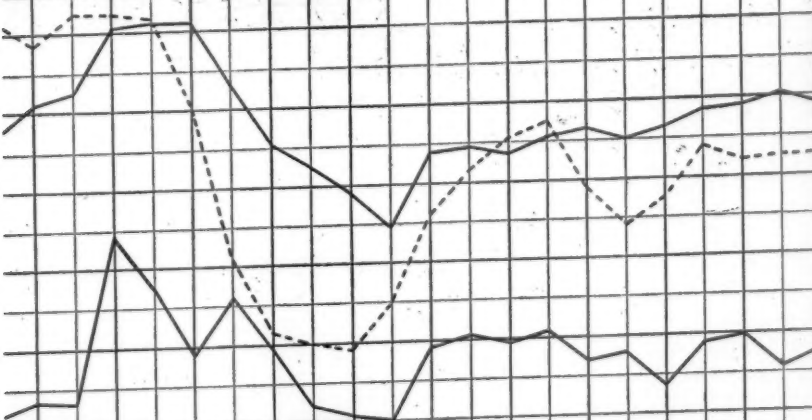
'70 '72 '74 '76 '78 '80 '82 '84 '86 '88 '90

000 Adults aged 15+



000 Females aged 15+

000 total Population.



000 total Population.

Excepting Denmark, Norway, and Italy, the birth-rate in every instance was higher in the first period than in the last.*

There is no ground for questioning the general statement that the birth-rate in the United States, as a whole, and in the separate States and Territories, is diminishing. This phenomenon is general: it appears in Europe as well.

We turn now to some questions on relations of the birth-rate to other phenomena; and, first, to the connection between birth-rate and marriage-rate. The attached chart represents the birth-rates based on the total adult population aged 15+, and the marriage-rates based on the adult female population.† At first sight there seems to be little resemblance in the two lines. It must be remembered, however, that changes in the marriage-rate could only influence the birth-rate after the lapse of a year or more. Hence we should expect that, if they vary together, the changes in birth-rate would follow those of the marriage-rate. The curves present a number of instances where a depression or elevation in the marriage-rate is followed in one, two, or three years, by a similar movement in the birth-rate. The points on the marriage curve indicated for the years 1854, 1863, 1873, 1878, 1883, and 1887, may be taken as illustrations. There are only four instances where a reversal of a downward or upward movement in the marriage curve is reflected in the birth curve for the same year: in 1858, 1860, 1866, and 1885. It seems to be the general rule in Massachusetts that changes in the birth-rate conform roughly to those in the marriage-rate of a year or two earlier.

An inspection of the chart indicates at once some degree

* The rates for the foreign countries are computed from statistics in the *Registrar-general's Report* for 1890, pp. lxiv-lxxiv.

† The figures for the birth-rates are given in Table II., column 4; those for the marriage-rates, in the article in the *Publications of the American Statistical Association*, December, 1895.

of connection between birth-rate and prosperity. Witness the rise in the birth-rates of the years 1850-57, and again of the years 1869-73, and the fall after the crises of 1857 and 1873. A connection between marriage-rate and prosperity appears also from the chart, and was pointed out in the article on marriage-rate already referred to; and this, since there is a correspondence of birth-rates with marriage-rates, serves to establish a relation between birth-rates and prosperity. But prosperity and adversity may influence the birth-rate in another way than through its effect on the number of marriages. A sudden increase in prosperity undoubtedly influences the birth-rate; but continued prosperity may not do so. Prudence and foresight are important factors among those bearing on fecundity; and in two different populations the marriage-rate may be the same, and the birth-rate yet very different. While temporary changes in prosperity affect the birth-rate, it cannot be said that, over a long term of years, advance in welfare will be reflected in an increased birth-rate. The reverse is often true.

Next we may inquire as to the relation between birth-rate and density of population. The marriage-rate is higher in the densely populated or urban districts than in those sparsely inhabited. Does the same relation hold for the birth-rate? To determine this point, a more thorough analysis has been made than in the study of the marriage-rate. Each of the 347 towns and cities of Massachusetts in 1885 has been considered separately, and they have then been combined into groups. To eliminate as far as possible accidental disturbances, the average number of births in each town and city for the nine-year period 1881-89 has been taken in computing their respective birth-rates. The foreign-born population is a complicating element in Massachusetts; and, as that population lives mainly in the urban and more densely settled districts, it is necessary to distinguish the birth-rates of the native and

the foreign born. Otherwise a higher birth-rate in the thickly settled districts might simply mean that the foreign-born element was stronger in those districts, for the

TABLE V.

DENSITY OF POPULATION AND BIRTH-RATE IN MASSACHUSETTS, 1885.

1	2	BIRTHS PER 1,000 MARRIED WOMEN.			DEATHS OF CHILDREN AGED 0-1 YEAR.		8	9
		3	4	5	6	7		
Population per square mile.	Number of towns in group.	Total.	Native.	Foreign.	Per 1,000 total deaths.*	Per 1,000 living births.	Number of survivors at one year per 100 married women, all ages.	Percentage of increase or decrease in population, 1876-85.
0-24	39	59.7	57.1	64.5	97.4	106.6	5.34	-13.9
25-49	64	62.9	58.3	89.1	103.7	121.5	5.53	-13.3
50-99	103	74.1	61.5	117.9	140.3	136.6	6.45	+2.2
100-199	44	83.0	67.2	119.0	143.9	122.5	7.23	+6.3
200-499	52	106.3	87.6	133.2	193.1	135.3	9.19	+15.9
500-999	22	106.0	84.1	146.3	194.3	136.3	9.13	+37.0
1,000-4,999	19	120.0	86.0	153.0	249.7	175.3	9.91	+29.5
5,000+	4	124.0	99.0	139.0	229.9	185.8	10.10	+17.0

foreign-born population is more prolific than the native. In Table V. the towns and cities of Massachusetts have been divided according to density into eight groups. It shows an increased birth-rate as the density of population increases. Not only is this true of the general birth-rate; it is true also, when comparison is made separately of the native and foreign-born birth-rates. In the nineteen towns and cities with a density from 1,000 to 5,000 persons per

*The figures in this column are based on the annual average of the total deaths and of the deaths of children under one year of age, during the period 1881-89.

square mile the birth-rate among foreign-born women is 2.37 times as high as in the thirty-nine towns with an average density of less than twenty-five persons per square mile. While the connection between increased birth-rate and increased density of population is most marked among the foreign-born, it appears also among the native-born.

A partial explanation of this striking coincidence of high birth-rate with density of population may perhaps be found in the fact that the streams of migration flow towards the urban districts. Not only do the vast majority of the foreign immigrants prefer city to country life, but the rural population of Massachusetts is flocking to the urban districts. Counting as urban the villages and cities having 4,000 or more inhabitants in 1890, Massachusetts showed a considerable decrease in her rural population during the decade 1880-90. The total population increased 25.57 per cent., the urban population increased 50.54 per cent., and the rural population decreased 14.85 per cent.,—in absolute numbers 66,956. Six of the fourteen counties showed a loss of rural inhabitants. As a rule, it is the young, strong, enterprising, and ambitious who migrate. The best vitality of the country goes to the large towns and cities.

It is interesting to compare the increase in the total population of the towns and cities of Massachusetts grouped according to density. The two groups with the lowest density show an actual decrease in population of more than 13 per cent.* The next four groups show an increase of population, progressively greater as the density increases. In the two groups of greatest density, however, the percentage of increase in population is lower than for the sixth group, which is probably to be explained by the fact that the great cities had attained more complete growth in 1875 than had the towns, largely suburban, with a density of from 500 to 1,000.

*See Table V., column 9.

No picture of the natural increase of a population can be formed without taking both deaths and births into account. The facts already stated as to the birth-rate in Massachusetts suggest many questions as to the death-rate. Has the death-rate decreased with the birth and marriage rates? Is there any close connection between births and deaths? Does density of population influence the birth-rate by affecting infant mortality? Light may be thrown on some of these questions from statistics which have been gathered in Massachusetts. It is not my intention, however, to attempt any detailed discussion of deaths and death-rates: I wish simply to point out the results of one or two lines of investigation.

The crude death-rate is the ratio between the persons dying and the living population among whom the deaths occur. The difference between the crude birth-rate and the crude death-rate of a population expresses the natural movement of the population. Throughout the period 1850-90 the birth-rate of Massachusetts has been higher than the death-rate. In the year 1864, however, the rates approached very near each other. The excess of births over deaths in proportion to the total population was greatest in the ten-year period just prior to the Civil War, and in the years just after the close of the war, and prior to the long depression of 1873-79. In the last decade both the birth and death rates have been very stable, with a slight tendency to an increase in the birth-rate and decrease in the death-rate. The natural increase in the population at the present time is very slow. There are about 26 births and 20 deaths annually to every 1,000 population; that is, there are added to the living population each year through natural increase only about 6 persons to every 1,000. This is a somewhat slower increase than most countries show. The following table presents the excess of births over deaths to every 1,000 population of Massachusetts and various foreign countries.

TABLE VI.

NATURAL INCREASE OF POPULATION IN MASSACHUSETTS AND
SEVERAL FOREIGN COUNTRIES.

	1871-75.	1876-80.	1881-85.	1886-90.
Massachusetts	6.7	5.4	4.6	6.3
England and Wales	13.5	14.6	14.1	12.6
Scotland	12.3	14.2	13.7	12.6
Ireland	9.5	7.1	5.9	4.9
Denmark	11.3	12.6	14.0	12.8
Norway	12.7	15.0	13.9	13.6
Sweden	12.4	12.0	11.9	13.2
Austria	6.8	8.3	8.1	8.8
Switzerland	6.3	8.2	7.4	7.0
Belgium	8.9	10.2	10.1	9.2
France6	3.5	2.5	1.0
Russia	11.2	13.8	12.0	13.3
Italy	6.4	7.4	10.6	10.3

The table shows that the natural rate of increase in Massachusetts is about the same as that in Ireland, Austria, and Switzerland. In France alone, where population is virtually stationary, is the natural increase markedly less than in Massachusetts.

The subject of infant mortality is of special importance in connection with a study of births. Table V. (columns 6 and 7) shows the relation between infant mortality and density of population in Massachusetts for the year 1885. There seems to be a remarkably close connection between infant mortality and density of population. In the sparsely settled districts there are fewer births relatively to the married women than in the more densely populated districts. But, on the other hand, fewer infants, relatively to the total number born, die before reaching the age of one year. Whether we compare the deaths under one year with the total living births or with the total number of deaths at all ages, the infant mortality is greater in the urban than in the rural districts. A high infant mortality is generally coincident with a high birth-rate; and the high birth-rate is generally assumed to be the cause of the

high infant mortality. This is doubtless true to a great extent; but may not a high infant mortality affect the birth-rate? The death of a child before it has reached the age of one year not only shortens the interval between child-bearing, but leaves a vacancy to be filled by another birth.

A fact of importance is brought out in column 8 of Table V. In those communities where infant mortality is greatest, the number who survive at the age of one, as compared with the married women, is greatest, and *vice versa*. The more children who die before attaining the age of one year, the more children are born, not only in an equal proportion, but in a greater; and, the smaller the infant mortality, the smaller is the fecundity of women. The explanation of this phenomenon is not difficult. In families where foresight and prudence rule there are likely to be fewer children born than in families lacking these qualities. Infant mortality, so far as it is independent of man's action, will affect both families alike. Looking no farther, we should expect a larger excess of children in the families exercising least foresight. It is true that the parents with little foresight are apt to give less careful attention to their children than the other parents, and their children hence would show a somewhat larger infant mortality. But the figures indicate that this is not sufficient to offset the difference in fecundity of the two classes of parents. Foresight and prudence seem to exercise a more powerful influence in restricting fecundity than in reducing infant mortality. In other words, the causes influencing infant mortality seem to lie more largely outside of man than do the causes influencing fecundity.*

In conclusion, a relation between conceptions and deaths may be mentioned, to which, so far as I am aware, attention has not hitherto been called. Considering the births

* Compare Tallqvist, *La Tendence à une Moindre Fécondité des Mariages*, pp. 59, 60.

of a given month to be the result of conceptions nine months previous, I have compared the conception-rate with the crude death-rate in Massachusetts for the twelve years, 1880-91. A study of the rates thus compared shows that, in general, a high death-rate is coincident with a low conception-rate. In those months when the equation of life is low—that is, when the surplus of vitality is small—there are many deaths and few conceptions. On the other hand, when the equation of life is high, as in the autumn and early spring, there are relatively few deaths and many conceptions. In 99 of the 144 months examined, or over two-thirds, when the death-rate was above the general average, the conception-rate was below the average, and *vice versa*.

The main results of the foregoing study may be summarized as follows:—

1. The excess of males born in Massachusetts was greater during the Civil War than in any other of the eight quinquennial periods; and during the last twenty years it has steadily decreased.
2. Illegitimacy has gradually increased; and at present about 1 child in 50 is illegitimate. This may be connected with the slowly declining marriage-rate.
3. The average annual number of births to 100 women between fifteen and fifty is about 9 instead of about 10, as it was forty years ago.
4. There is some reason for doubting the accuracy of the census figures indicating a general and very rapid decline of the birth-rate in the United States between 1880 and 1890.
5. The birth-rates have fluctuated in rough conformity with the fluctuations of the marriage-rate a year or more before.
6. The denser the population, the higher the birth-rate, and this both among the native and the foreign born population.

7. The denser the population, up to 1,000 to a square mile, the more rapid was the increase between 1875 and 1885; while the 108 towns having less than 50 people to a square mile as a whole lost one-seventh of their population.

8. The denser the population, the greater the infant mortality. But the birth-rate increased with the density of population faster than the infant mortality.

9. In months when deaths are many, conceptions tend to be few, and *vice versa*.

F. S. CRUM.

CO-OPERATIVE STORES IN THE UNITED STATES.

NOTHING is more conspicuous in the co-operative necrology of the United States than the persistent failure of the co-operative store. Store-keeping is generally considered one of the simpler forms of business enterprise, and the failure of the simpler might be expected to include the failure of all the rest. So far as productive associations are concerned, this is largely true; for the waning prosperity of the several surviving cooper shops in Minneapolis is still cited as chief witness to the sporadic success of co-operative manufactures in the United States.* But, contrary to expectation, our farmers have succeeded in the conduct of co-operative creameries and fire and tornado insurance companies; our large fraternal life insurance companies also testify to co-operative capacity; and the astonishing development of building and loan associations is a matter of national repute.† Nevertheless, the co-operative store, whether urban or rural, indigenous or exotic, has rarely survived the ephemeral wave of enthusiasm to which it has generally been due. What is still worse, half a century of alternate enthusiasm and failure has left little behind it in the way of cumulative experience. This is partly because co-operation, like other phases of labor organization in this country, has often been merely an incident in some complicated and ill-fated propaganda of industrial and social reorganization. Thus it happens that wave after wave of co-operative enthusiasm has risen and subsided with painful regularity, leaving little behind but the débris of financial wreckage and disheartenment.

* See the article on "Co-operative Distribution in the United States," by Dr. E. W. Bemis, in *Bulletin of the Department of Labor*, September, 1896.

† *Ninth Annual Report of the Commissioner of Labor*, 1894.

The first of these periodic movements appeared in New England between 1847 and 1859. So-called union stores to the number of 769 are said to have been organized, 350 of them reporting in 1857 a capital of \$291,000 and an annual trade of \$2,000,000. Of all this number there are scarcely any survivors. The *Bulletin of the Department of Labor*, however, is wrong in stating that "none survive."* The Protective Union of Worcester, Mass., dates from December 18, 1847. It illustrates the "union" joint-stock method of organization, on a basis of limited membership, ownership of an equal share by each member, and equal division of net profits, above reserves, annually,—equivalent to dividend on capital only. Still another metamorphosed survivor is the Central Union Association, of New Bedford, Mass., which—organized as The Workingmen's Protective Union in June, 1848, afterwards rechristened The New England Protective Union—adopted its present name in 1861. The failures of this period apparently bequeathed no legacy of experience to the second or grange store movement, which dates from the organization of the Patrons of Husbandry, in 1866. So far as known, both these movements followed the general plan of selling slightly above cost, or, at all events, below current prices. Both appear to have met the same fate. Isolated attempts to profit by domestic and foreign experience, by adopting the Rochdale plan of organization, appear from time to time; but it was left for an organization known as Sovereigns of Industry to start a third wave of enthusiasm during its brief career from 1874 to 1880, and to demonstrate that not even the popularization of Rochdale methods by paid lecturers could prevent the humiliating recurrence of a general collapse, though happily eight or nine societies of this group are still alive. The extent of this movement may be inferred

*The error is less easily accounted for in view of the description of these societies in a recent treatise, *How to Co-operate*, by H. Myrick. New York, 1895 (the Orange Judd Company).

from the reports in 1877 of 94 "councils," mostly in New England, New York, New Jersey, Pennsylvania, and Ohio, showing an average membership of 77 and an annual trade of \$1,089,372. Something like half these stores are said to have sold at market prices and distributed dividends on the purchases, and a few grange stores appear to have been converted to the same plan.

It was in the natural order of events that the Knights of Labor should be responsible for the fourth general crop of attempts and failures. The preamble of the order, after enumerating the many things it expects the States and the national government to do, announces that the association will in its turn endeavor "to establish co-operative institutions, such as will tend to supersede the wages system, by the introduction of a co-operative industrial system." The exuberance of the years 1884 to 1888 could not be expected to find adequate outlet in the narrow channels of distributive enterprise. Scores of workshops, mines, and factories were organized throughout the country in blissful ignorance of the past and boundless confidence that the future belonged to union labels and co-operation. The pathetic failure of these expectations is too recent to call for recital, and only repeats the experience of the past. Finally, without attempting to complete our melancholy retrospect, it is enough to mention the unsuccessful efforts of the farmers' associations known as The Wheel and The Alliance, to establish co-operative stores in the Southern States from 1886 to 1892.

It is needless to say there have been some survivals from all this enthusiasm and wreckage of the past fifty years; and we are indebted to the official *Bulletin of the Department of Labor*, September, 1896, for a detailed examination of existing societies. According to this investigation "the total co-operative trade outside of New England, so far as reported, was about \$900,000 in 1895 as contrasted with about \$1,000,000 in the associations mak-

ing even partial returns in 1886. Although it is believed that no large societies have been overlooked, it is quite possible that as complete a survey of the field as was made in 1886 * might reveal a small growth in the co-operative trade outside of New England during the past ten years. Nearly all the associations that have been reached in this inquiry give dividends on trade; but in Kansas these dividends are very small at present, owing to the agricultural depression there, which is causing the failure of many private stores."

In New England the outlook is said to be more encouraging. "While six of the stores that had a trade of \$134,000 in 1886 are now closed, the trade of the remaining thirteen of those in existence in the former period has grown from \$479,900 to \$978,951.48; and nine new stores report a trade of \$251,409.49." The total co-operative trade in New England, almost entirely on the Rochdale plan, is thus over twice as great as ten years ago. It may be well to add on the same authority that "the oldest co-operative store in this country at the time of its failure, in 1896, was the Danvers Co-operative Union Society, with a capital of \$5,500, in the shoe manufacturing town of Danvers, Massachusetts." Founded in 1865, it adopted the Rochdale plan in 1869, and after a career of more than thirty years failed disastrously. Although the fate of this society is not without its moral, the alleged claim to seniority, like other easily verifiable statements of the same sort in this report, proves upon inquiry to be disconcertingly inaccurate. The oldest surviving societies would seem to be the Protective Union of Worcester, Massachusetts, organized in 1847, and the Central Union Association of New Bedford, Massachusetts, organized in 1848, as already indicated. The Natick Protective Union of Massachusetts, founded in 1866, on the

* In the *Johns Hopkins University Studies in History and Political Science*, vol. vi.

"union" joint-stock plan, of equal shares and equal dividends, is also one of the older survivors of the type. The Co-operative Store Company at Silver Lake, in the town of Kingston, Massachusetts, which began business in 1875, is generally conceded the honor of making the longest successful trial of the Rochdale plan in the United States. A small society, with a capital of \$2,000 and an annual trade of less than five times that amount, its exceptional longevity and success are doubtless due to the small, stationary population of the place and to the uninterrupted services of a devoted manager. According to the official estimates the largest proportion of co-operators to be found in any one city is in Lawrence, Massachusetts, where there are three societies with "3,751 members, embracing about 19,000 persons, if each member is considered to represent a family of five persons. This is 36 per cent. of the population of the city." Some of the idiosyncrasies of the movement may be inferred from the fact that "in Kansas most societies admit only members of the Farmers' Alliance, the Patrons of Husbandry, or other farmers' or other laborers' organizations"; while a society at Los Angeles, California, requires that the officers and employees shall be "Socialists in good standing in the sections where business is done."

The ascertained membership of co-operative stores in New England early in 1896 is placed at 10,692, and the membership elsewhere at 6,115, with a couple of thousand to be added for societies making no report,—some 19,000 in all. The trade, in 1896, of 20 New England societies with a membership of 10,242 is placed at \$1,174,000, or \$114.63 per member; that of 21 societies, comprising 5,465 of the total membership outside New England, at \$1,198,000, or \$219.21 per member for 1895; and it is pointed out that "the sales of 1,711 British co-operative societies, with 1,414,158 members in 1895, averaged £37 2s. 8d. (\$180.71) worth of goods per member, or a total

of £52,512,126 (\$255,550,261.18).” * From still further analysis of their financial standing it appears that 15 of the New England societies, with a total capital of \$269,873.50, a surplus of \$38,098.60, and an amount borrowed of \$11,987.58, had an average business in 1895-96 of \$374 per \$100 of capital, and a total expense of \$127,275.88, including interest at 6 per cent. on the capital and amount borrowed, but not on the surplus,—an average expense of 12.6 per cent. on the trade of \$1,008,977.24. The corresponding figures for 13 societies outside New England show a capital of \$184,302.65, a surplus of \$62,075.09, \$16,944.20 borrowed, a business of \$313 per \$100 of capital, and a total expense of 11.7 per cent. of the trade of \$577,368.16.

In 1885 the average rate of dividend on the trade of members was 6.8 per cent. in 20 New England stores, and only 3.5 per cent. in 13 elsewhere; while returns from 1,036,992 English co-operators, quoted from the *English Labor Gazette* for June, 1896, show that only 1.3 per cent. of this number received 5 per cent. or less, 14.2 per cent. of them received from 5 to 10 per cent., 54 per cent. received from 10 to 15 per cent., the remaining 30.5 per cent. received over 15 per cent. Incidentally, it appears also that the average wages of the 96 employees in 10 of the larger American societies is \$609.64 per year; while “the average of the 102 employees in 24 societies of about the same character in the Manchester, Oldham, and Rochdale districts of England, in 1895, was \$377.50.” Estimates of business efficiency, based upon such comparisons, are far from conclusive; but it would seem clear that, while the legitimate expenses of societies in the United States may be higher than in England, the low dividends of the American societies obviously invite some other explanation. The business of these societies is largely confined to the miscellaneous trade in what are

* *Bulletin of the Department of Labor*, September, 1896.

known as "groceries," though dry goods, boots and shoes, coal, and other supplies are sometimes included. Articles not kept in stock are frequently provided for by special discount arrangements with private tradesmen; and this outside, or "affiliated," trade is often large.

After all, it must frankly be confessed that even this array of statistical evidence gives to the present aspects of the movement an appearance of coherence and stability which it does not possess. Indeed, these diverse, widely scattered, and disconnected remnants can scarcely be said to constitute a movement, in any proper sense of the term. Some of them are doomed to failure. The success of others—some of the largest and most prosperous—is less a tribute to co-operative management than to the business sagacity of individuals who have gradually assumed the control of affairs, and closely assimilated the conduct of a co-operative store to that of a private firm. So far as any propagandist spirit is concerned, these scarred veterans of unsuccessful crusades are painfully free from generous illusions. With honorable exceptions, they are content to struggle for their own precarious salvation, and leave to youthful converts the propagation of the gospel.

Fortunately for the future of co-operative stores, new converts seem ready to undertake the mission. Indeed, it is in the humble beginnings of what may prove a new departure rather than the older experiments that the hope of improvement chiefly centres. Not that there is any immediate danger of an old-fashioned co-operative revival. Under favorable conditions such epidemics may doubtless recur; and the intermittent fever will burn itself out in the future as it has so often done in the past, doing worst damage in districts which have escaped contagion before. On the other hand there is some reason to hope that in parts of the country where the teaching of experience has been painfully obvious the lessons of previous epidemics

are beginning to be conned with care. The result promises to be a quiet enthusiasm for small beginnings and earnest work; a new capacity for going slow and taking one step at a time; an ability to combine intense convictions with a chastened respect for facts; and a sober intention of turning the waste energy of general aspirations upon the prosaic problems of a work-a-day store. The best embodiment of these new characteristics is found in the little group of Eastern co-operators which recently organized the Co-operative Union of America, in September, 1895.* Abortive attempts to establish a co-operative union have been made before; and at the present moment there are several aspirants who have assumed the title, if not the functions, of such an organization. For example, a congress held early in 1896, for the purpose of federating the various forms of co-operative organization in Kansas, was followed by the call to a national convention to be held at St. Louis the same week as the Populist convention, which met there in July of that year. The conjunction did not prove a happy one. The proximity of so much political enthusiasm was more asphyxiating than inspiring. But in spite of rival attractions, paucity of attendance, and the fact that those present came for the most part on their own responsibility, and not as delegates from co-operative societies, a national organization was announced, with the title of the American Co-operative Union.† Aside from geographical considerations, it is probably quite as well that the methods and aspirations represented in this effort should be embodied in a separate organization. It is quite in keeping with the circumstances that the close approximation in name to the society just mentioned should have been the result, not of ignorance, but of accident, deliberate intention, or defi-

* President, Mr. Robert E. Ely; secretary, Mr. James Rhodes,—both of Cambridge, Massachusetts.

† President, Mr. Alonzo Woodall, of Kansas; secretary, Mrs. Imogene C. Fales, of New York.

cient ingenuity. In any event the American Co-operative Union, so far as it is anything more than a name, seems to have little in common with the modest aims of the Co-operative Union of America.

Of the fourteen societies comprising this Eastern union, twelve are in New England, one is in New Jersey, and one in New York. The rules in regard to membership are as follows:—

"1. Persons in sympathy with the Rochdale plan of co-operation may, upon the approval of the office committee, become members of the union by paying a fee of \$1 per year.

"2. A co-operative society, a trade-union, and any other organization may, upon approval of the office committee, become a member by paying an annual fee equal to not less than two cents per annum for each of its members."

Most of the societies belonging to the union are of the newer and smaller class. It is in keeping with the disillusioned temper of the older societies that they hesitate to respond with cordiality, and confine their expressions of good will to occasional participation in special conferences. The purposes of such a union need hardly be described in view of the well-known functions of its English prototype. To bring to bear upon the problems of co-operation the results of careful study, wide experience, free discussion and united action; to persuade beginners to start right, and to assist those who are going wrong; to prevent failures, reconcile factions, promote harmony, expound and exemplify the co-operative spirit,—such unquestionably are its aims. To this end, in spite of serious financial limitations, the union has kept a paid secretary in the field, has held conferences, responded cordially to demands upon its good offices, and adopted a policy of cautious propaganda, with a view to guiding and strengthening rather than creating co-operative experiments. The organ of this propaganda is the *American Co-operative*

News, an attractive and highly creditable magazine, comprising some twenty octavo pages of technical and miscellaneous matter, published the first of every month by the Co-operative News Society, Cambridge, Massachusetts. "Devoted to the Rochdale plan" is reiterated with such constant emphasis upon the illuminated cover, the title-page and elsewhere, that it may be worth while quoting what a recent number of the *News* declares to be "the cardinal principles of the Rochdale plan." * "These naturally resolve themselves under ten heads, as follows:

"1. Representative government; that is, the committees are chosen without canvassing or undue pressure by the members.

"2. Distribution of a fair portion of profits to purchasers, whether members or not.

"3. Market prices, without attempting to increase sales by cutting rates.

"4. Pure unadulterated goods served alike to the poor as well as to the rich.

"5. Cash trade.†

"6. Education by classes, lectures on co-operation, reading-rooms, libraries, etc.

"7. Investments in co-operative productive societies.

"8. Bonus to labor.

"9. Portions of the profits distributed in charity; that is, grants of bread, flour, coal, etc., in times of distress.

"10. Federating with other societies in trying to develop the movement by the formation of wholesale cen-

*The *American Co-operative News*, vol. i., No. 4, October, 1896. The subscription price of this periodical, which is indispensable to the student of the present movement, is 50 cents a year.

†A characteristic tribute to the merits of the cash system, with strong local color, comes from the manager of the Linn County, Kansas, Patrons' Co-operative Association, founded in 1875. "In 1886 we became convinced that the credit system would ruin us, and shut down to spot cash or no trade. . . . We pay cash, and get the benefit of cash discounts. Our clerks are willing to work for less wages, as they are not obliged to 'thrash' half the customers for kicking at being dunned." H. Myrick, *How to Co-operate*.

tres, productive enterprises, and securing of suitable legislation."

That there is need of caution, wise counsel, and technical advice in the constructive and reconstructive work which such a union finds at hand is obvious at a glance. The statutes of the different States relating to co-operation are entirely lacking in uniformity, and present anomalies of every sort which invite legislative revision. While there is much to commend in the laws of Massachusetts, New York, and New Jersey, the extremes of absurdity are revealed by the following extract from the statute in Illinois:* "If in any kind of industry it should be impossible to assign all shareholders to equally advantageous positions or locations in work, the association may provide that shareholders shall periodically change places or provide any other method of equalizing such matters in accordance with justice and equity."

Even the Massachusetts law, which permits the incorporation of societies with seven or more members, and not less than \$1,000 capital, is considered so unsatisfactory that the Co-operative Union of America has endeavored — though without success — to persuade the legislature now in session to facilitate incorporation by removing the restrictions in regard to a minimum capital; to make possible the establishment of a wholesale society by permitting societies to invest capital in other co-operative societies; to eliminate a potent cause of failure by declaring that "every such corporation, carrying on co-operative trade, shall make sales of its merchandise for cash only"; to secure exemption from taxation on capital stock; and, among other things, promote "instruction and culture" by a compulsory educational fund not exceeding 5 per cent. of the net profits.† Whatever may be thought of the compulsory "culture" clause or of this

* Quoted in the *Bulletin of the Department of Labor*, September, 1896, p. 634.

† *American Co-operative News*, March, 1897, p. 177.

legislative crusade against credit,—which is already embodied in the laws of Pennsylvania and Wisconsin,—it is clear that work of this sort calls for the best thought the community affords, regardless of conventional distinctions as to station or occupation. It is one of the merits of the present management of the union that it is in a position to secure precisely the collaboration required on the part of professional men, workmen, and other public-spirited citizens.

Thus far the union has avoided any clash, either with the socialistic minority or with trade unionists. Its conciliatory attitude towards trade-unions is evinced by the passage of a resolution to the effect that it is advisable for stores to sell union-made goods whenever it is possible. To some extent, the attempt to enlist the sympathy of trade-unions has succeeded. The American Federation of Labor has expressed approval of Rochdale co-operation; and a Union Stamp Co-operative Society for the sale of union label boots and shoes has been started by trade unionists in Haverhill, Massachusetts.

No serious attempt has thus far been made by the Eastern group to undertake the national functions suggested by their name. There is no reason to think that conditions are ripe for effective national organization or that remote sections of the country could agree upon a common creed. In fact, if we have read the lesson of the past aright, the danger most to be apprehended for the present humble beginnings would be some rapid expansion inconsistent with healthy growth. The epidemic tendency is in the blood.

Indeed, a picturesque embodiment of some of the difficulties and novelties which would be encountered by any real attempt at a comprehensive national federation is afforded by the recent development of so-called Labor Exchanges, which modestly regard themselves as the only exponents of "true co-operation." They originated in

Missouri in 1889, spread rapidly, effected a national organization, and were said by their president, in June, 1896, to have one hundred and thirty-five branches scattered in thirty-two States, and a membership of 6,000, representing every trade, profession, and calling.* Their aversion to the ordinary medium of exchange, and their esoteric preference for labor checks and cumbrous forms of barter suggest a reversion to vagaries of the days of Robert Owen. "Our leading object," continues the president, "is to employ idle labor without lowering the customary wages, and interchange labor's products without competing with customary prices. As we issue certificates for deposits, we need have no fear of losing our customers; for we hold the final redemption for the outstanding certificates at par." Members who deposit any product of labor receive in return an exchange check of a denomination which the officers think would represent the local wholesale price in money. The goods are then offered for sale at the ordinary retail advance; and the depositor may use his check (which is redeemable in goods, but not in legal money) to buy anything he cares for. The profits belong to the society, collectively, to be devoted to propagandist, charitable, or other purposes. Practical experience with the difficulties of bartering Massachusetts shoes for the dried fruits of California has convinced one of the rare representatives of the movement in the East of the superiority of the ordinary Rochdale plan. Southern California, on the other hand, rejoices in twenty-two of these societies. While there are obvious objections to confusing these enterprises with ordinary co-operative stores,† they certainly present to the student an interesting field for further inquiry. Some of them have already proved to be of slight stability.

* *Bulletin of the Department of Labor*, September, 1896.

† In the *Bulletin of the Department of Labor* (*ibid.*) the membership is used to swell the numbers of store-keeping co-operators without sufficient discrimination.

Taken as a whole, it may be said, in conclusion, that the co-operative store movement in the United States bears all the marks of the unmistakably premature. There is scarcely any corporate ill with which it has not been afflicted. It has suffered in the past from entangling alliances with the nebulous programmes of other movements; from the democratic optimism which believes in the inevitableness of success and the impossibility of attempting too much; from contempt for small savings, contempt for history, and lack of good advice; from instability of population, due to immigration from without and migration within; most of all, from instability of leadership, due to the ready outlet for business ability in enterprises where success brings greater rewards, both in money and in social advancement.

EDWARD CUMMINGS.

THE STEADILY APPRECIATING STANDARD.

IN recent numbers of the *Political Science Quarterly** Professor J. B. Clark has advanced a new theory concerning the influence of changes in the value of money. Since the days of Hume the view has been more or less widely entertained that any but a stable standard of values causes injury. It has been maintained, further, that, of the two variations, appreciating money has depressing effects upon industry and enterprise, while depreciating money, on the contrary, brings a stimulus. Now, it is admitted that a currency has these effects when it is beginning to appreciate or to depreciate, and hence that a fluctuating currency is apt to exert the one or the other of these influences. But the view is advanced by Professor Clark that, when the appreciation or the depreciation is steady and constant, business soon adapts itself to either of these conditions, counteracting its effects by an adjustment of the rate of interest. For, if money is appreciating 1 or 2 per cent. annually, a retraction of about 1 or 2 per cent. in the money interest from the normal rate of interest measured in commodities is conceived as restoring the normal relationship between borrower and lender; and similarly, if money is depreciating, an equal addition to the money interest would preserve the same relationship. And it is maintained that, in this way, a steady change in the value of money will, after a while, be forestalled by lenders and borrowers, if not adventently, yet because profits, reckoned in money, are affected, so that the adaptive change in the money interest will come about naturally in the ordinary course of business. Therefore, the "sweeping claim" is made that "not by one iota can such a slow and steady movement [in the value of money], in itself alone, rob the borrowing class," and that even a steadily appreciating standard, provided the change be not too great (a yearly appreciation of 3 per cent. is not feared), is "almost"

*September, 1895, June and September, 1896. In referring to these articles hereafter, I shall simply mention the dates.

as "ideally good" as an absolutely stable standard, and under it "justice will be done and business will thrive" equally well.*

This theory is offered as a contribution to the discussion about our monetary system, in defence of the gold standard, which is admitted to be appreciating; and attention is drawn only to the case of appreciation. But the theory, if correct, is of universal and abiding importance. It therefore eminently deserves serious examination.

Professor Clark confines his illustrations of the theory to a supposed case where the normal rate of commodity interest is 5 per cent. and the steady appreciation of the monetary standard 1 per cent. annually. We may do the same. And, of course, in order to eliminate conflicting causes, the supposition is always to be entertained that the country is in a stationary condition; that is, that the average natural yield to invested capital remains constant, and thus the normal rate of commodity interest at least ought to be unchanged. We shall take the dollar for the money unit, and in all cases regard the commodity unit as being the equivalent of the dollar at the commencement of a loan. In the theory, and consequently in our examination of it, there are two distinct departments. The one is the consideration whether the restorative can be made by a change in the interest merely. This is a mathematical question. The other is the economic question whether such restorative is likely to be effective in practice.

First to be considered is the simplest case, which is that of a loan for one year (viewed as the interest-paying interval). If money appreciates 1 per cent. in the course of the year, and the proper commodity interest is 5 per cent., it is apparent that a contract to pay 4 per cent. (commodity) interest † and to repay the same money principal at the end of the year, when it is worth 1 per cent. more than at the beginning, is virtually a contract to pay one hundred and five commodity units at the end of the year, or the principal *plus* 5 per cent. ‡

* June, 1896, pp. 251, 250, 258.

† The money interest would be 3.960396 per cent., to which a sufficient approximation is 3.96 per cent.

‡ June, 1896, pp. 253, 254, 256.

Under a stable standard the borrower of \$100 might make either of these two contracts indifferently: (1) to repay at the end of the year \$5 as interest and \$100 as principal, total, \$105; or (2) to repay at the end of the year \$4 as interest and \$101 as principal, total, \$105. The difference would be only nominal. Now the contract, under the standard appreciating 1 per cent. a year, to repay at the end of the year \$3.96 as interest and \$100 as principal (the former having acquired the purchasing power of four and the latter of one hundred and one of the original dollars) is exactly like the second of the above contracts under the stable standard, and therefore it is also like the first.

The case is not so simple when the loan is contracted for more than one year. A loan of a hundred commodity units paying 4 per cent. (commodity) interest for ten years, at the end of which the principal repaid is worth 10 per cent. more than it was at the beginning, is really repaid with a total of one hundred and fifty commodity units; and it is said that this is the same as a 5 per cent. loan under a stable standard, which also is repaid with a total of one hundred and fifty commodity units.* Under the stable standard contracts can be made in either of these two ways: (1) the borrower of \$100 agrees to pay \$5 at the end of every year as interest and at the end of ten years to repay \$100 as principal, total, \$150; or (2) he agrees to pay at the end of every year \$4 as interest, and at the end of ten years to repay \$110 as principal, total \$150. It would seem that the theory under discussion assimilated the 4 per cent. loan under the steadily appreciating standard to the second of these loans under the stable standard, and thereby also to the first. But there are two reasons why this cannot be done. In the first place, under the appreciating standard, a loan paying 4 per cent. commodity interest every year is impossible when made in an ordinary money contract. The contract demanded by the theory is to pay 3.96 per cent. money interest. This, to be sure, at the end of the first year is a 4 per cent. commodity interest; but, at the end of the second and subsequent years, it is a gradually larger and larger commodity interest,—in fact, the total repayment

* September, 1895, p. 392.

of such a loan would purchase (when received) nearly one hundred and fifty-three and a third commodity units.* And, in the second place, even if this loan, made under the appreciating standard, were like the second of the above loans under the stable standard, it would not be like the first, which is the normal one; for the second is not in this case only nominally, but is really different from the first. In the second the creditor is out of his money longer, and thus the "present value" of the two loans is different.

It is to be noticed, however, that under the stable standard the second form of the loan would be like the first, so far as the borrower is concerned, if he simply laid aside one dollar every year. But he is a gainer if he puts this one dollar every year into his business, or out at interest, along with its fruits (gaining more than three and a half dollars on the loan supposed). On the other hand, the loan under the appreciating standard is, in a way, to the borrower's loss, as he has to pay back more commodity units. It might be, then, that these two gains and losses cancel each other. It might happen that if the borrower put into his business, or out at interest, the 1 per cent. commodity interest which is left in his hands at the end of the first year, and whatever commodity amount is so left to him at the end of every subsequent year, representing the reduction in his interest, he might counteract the loss by the product of this saving. That such is the case can easily be shown by the analysis on the following page of a loan of one hundred dollars, pursued to the end of the fifth year.

Thus, theoretically, the correction takes place. The debtor neither loses nor gains†; and likewise, therefore, the creditor neither gains nor loses.

It is easy to explain this result by saying that a result already reached for a short loan must be found true in a long loan, because a long loan may be viewed as a short loan

*The longer the period, the more rapidly the difference grows. A loan of \$100 at 5 per cent. for a hundred years is repaid with a total of \$600; but, under the steadily appreciating standard, at only 3.96 per cent. it is repaid with a total of 366 commodity units.

†If the calculation were worked out more exactly, a gain of a very small fraction would be left to the borrower. This is due to the fact that the interest, 3.96 per cent., is by a very small fraction too small.

End of the year.	Capital has yielded commodity units.*	Total commodity units on hand.	Value of the commodity unit, in dollars.	Value of the total, in dollars.	Payment of interest, in dollars.	Capital remaining, in dollars.	Capital remaining, in commodity units.
First	5	105	.9901	103.96	3.96	100	101
Second	5.05	106.05	.9803	103.96	3.96	100	102.01
Third	5.1005	107.1105	.9706	103.96	3.96	100	103.03
Fourth	5.1515	108.1815	.9610	103.96	3.96	100	104.06
Fifth	5.203	109.263	.9515	103.96	3.96	100	105.10

renewed every year. But this explanation is not satisfactory. To understand the matter we need to pay strict attention to what takes place in such a loan as above analyzed, and to the conditions under which the desired result is reached. The following remarks suggest themselves.

(1) Under the steadily appreciating standard the long loan at reduced money interest is *not* like either of those long loans under the stable standard offered for analogy. It is not like the first, because, as we have seen, it requires a larger payment in commodities; and it is not like the second, we now see, because, to protect himself from loss, the borrower must not merely lay aside every year what is saved to him in the reduced interest, but he must either put this into his own business or lend it out at the same rate of interest.

(2) It is *not* a mere renewal every year of a one-year loan. It is a renewal at the end of the first year of the original loan (regarded as a one-year loan) *plus* what has been saved through the reduced money interest, and at the end of the second year of this new loan *plus* the new saving, and so on.

(3) If the borrower puts the savings into his business, the volume of his business increases every year,—on the same money capital, but on enlarging commodity capital. If he

*Of course the capital yields more than this, for it yields profit to the borrower, in payment for his labor. But it yields 5 per cent. in commodity, according to the hypothesis, for the purpose of paying interest.

puts it out at interest, the volume of his business remains the same,—on diminishing money capital, but on the same commodity capital; and he has, beside his business, in investments, a new sort of sinking fund. This is not a sinking fund for paying off the original (commodity) loan. It is a sinking fund to prevent the original loan from becoming larger (in commodity).^{*} If the former course be pursued, the volume of his business, so far as it is operated on the borrowed capital, grows larger every year at exactly the same rate as the money unit appreciates, which, by compounding, is at a rapidly accelerating pace. If the latter, the sinking fund grows larger every year at the rate at which the increased volume of the business would have been valued in the new money,—a diminishing rate, the total never reaching the original money capital, but always remaining distant from it by the present money value of the commodity units originally borrowed.[†]

(4) It is a condition of the debtor's solvency that he makes this saving of an increasing commodity and decreasing money amount every year, and either adds it to his business or places it in a sinking fund. Under the stable standard a reduction of money interest is a reduction of commodity interest, and accrues to the borrower's benefit, and can be appropriated by him as part of his profits. Under the steadily appreciating standard this reduction of money interest does not represent a reduction of the commodity interest, and must not be mistaken for such by the borrower, or he does so at his peril.

(5) Thus, while the debtor is ever driven to add to his business or to the peculiar sinking fund, so the creditor is every year losing so much of his interest on his virtual loan and is having it added to his investment,—that is, to the commodity value of his stationary money investment; he is compelled to save and to accumulate. If the loan be a very long one,

^{*} This sinking fund would, no doubt, in practice, be merged with the ordinary sinking fund for paying off the loan; but it is distinct in nature, having no existence under the stable standard.

[†] *E.g.* at the end of the 5th, 10th, 20th, 40th, 80th, 100th, 200th years the volume of business will have grown 5.1, 10.46, 22.02, 43.89, 121.67, 170.44, 631.37 in percentages of the original business (on the borrowed capital); or the sinking fund will have grown 4.85, 9.47, 18.03, 32.83, 54.88, 63.01, 86.31 in percentages of the original money loan.

there comes a time (in the case used for illustration about the twenty-fourth year) when the reduced interest on the loan, rising in commodity value, equals in purchasing power the normal commodity interest on the original loan, and thereafter ever grows greater, so that the creditor ultimately gains enormously, but at the expense of an originally absolute and ever real economy.*

(6) The preceding considerations, under the supposition that the debtor can observe the conditions imposed upon him (the creditor, by the hypothesis, *must* observe them), show the justice of the ever-increasing and rapidly accelerating value of the interest annually paid and of the enhanced value of the principal returned at the end of the period. It is because the loan has really itself been increasing every year, in commodity; and it is not the original loan, but ever growing (commodity) loans that are being paid for.

It is evident after this analysis that there is a great difference between a long loan paying 3.96 per cent. money interest under the 1 per cent. appreciating standard and a long loan paying 5 per cent. interest both in money and in commodity under the stable standard. This is a simple mathematical difference, about which there can be no dispute. Let us now examine what effect this difference in the nature of loans would have upon business in actual practice. It is admitted that mathematically it is conceivably possible for the debtor to avoid suffering provided he pursues a line of conduct not demanded of him under the stable standard, and provided also the creditor will submit to a course of saving not demanded of him under the stable standard. Here are two provisos of great importance, which, apparently, have not received sufficient attention.

At first sight it might be thought that, contrary to the usual view, an appreciating standard would be conducive to progress, as it demands economy and accumulation on the part of creditors and extension of business on the part of debtors. But it does so only on the supposition that the theory will

*The same result is obtained for the creditor if he invests his money in shorter loans, say five-year mortgages, and upon their settlement reinvests the same sum.

actually work in practice. The question is, What likelihood is there that debtors and creditors will behave as the theory requires of them? This question is composed of two questions:

(1) Will the long-time debtor always satisfy the condition he is subjected to of increasing his business or his depreciation-meeting sinking fund? Here a difference may be discovered between business men.

If a person, though borrowing for a long period, employs the loan for circulating capital, which is "turned over" every year or even more quickly, he will no doubt go through the process of inventorying his stock every year or so, as described by Professor Clark,* and he will always try to keep in his business the capital borrowed intact in money, which he can do only by carrying every year a larger stock (which is permitted him by the reduced interest); and this he can do the more readily because the increase of his capital is of the same nature as his capital itself. But, as a rule, such a person, a merchant, does not make long loans, there being no need of his doing so. He borrows from year to year or from season to season; and, if he does not care to increase the volume of his business or has not facilities for so doing, he needs to borrow less and less money every year. He escapes the need of increasing his business or of forming a peculiar sinking fund.

But, if a person borrows for fixed capital, he must borrow for a term of years, and thus during that period he cannot escape that need. If a factory is built, which we may suppose is from the beginning running at full capacity, so that its commodity product cannot be increased, the borrower must add every year to its equipment or take up some additional line of business or form the sinking fund aforesaid (in addition to the sinking fund against the wearing out of the machinery, which the stable standard also requires). If it be a railroad, which we suppose may be earning the normal 5 per cent. commodity interest rate, it must every year either add to its length, or improve its condition in a profitable manner, or save up this kind of sinking fund. In such cases the borrower for fixed capital suffers, compared with the merchant, because the in-

* June, 1896, p. 253.

crease of his capital saved by the reduced interest is of a different nature from his capital itself, and cannot always be directly used as capital in his business, but requires a distinct effort to invest it. He is at a disadvantage also in another way. When he comes to make his annual inventory, he does not know the current money value of his land and building and machinery so well as the merchant knows the current money value of his stock. He is inclined to keep them on his balance sheet at about the same figures as at first, until after several years the difference becomes noticeable in the rates at which land is sold in the neighborhood and at which new buildings can be erected and new machinery purchased. Thus the money depreciation of his property may for a long time escape his notice, and in the meanwhile he does not take advantage of the reduction in his interest to provide against it. Again, a man who mortgages his house is apt to look upon it, if sufficient security at first, as continuing to be sufficient security (if he keeps it in repair and the character of the locality does not change). But, under the appreciating standard, his house is every year becoming smaller security; and, though he has the power, through the reduced interest he pays, to save up and add other security to his house, yet unless he is exceptionally well informed, he is likely not to do so. Many borrowers will simply be inclined to appropriate to themselves, as a piece of good fortune, the amount left to them by the reduction of interest, or will embark upon less remunerative enterprises, treating the reduction as if it were in commodity interest, and not merely in present payments to permit them to meet greater future claims. The lowered interest is deceptive, and will lure many to their loss. The appreciating standard demands of long-time borrowers a great deal of foresight and continence not demanded of them by the stable standard. Consequently, many will fail who would not fail under the stable standard.

But even if long-time borrowers possess this wisdom, there is a question whether they will be able to act in accordance with it. Is it possible for the owners of a factory, of a railroad, built more or less on borrowed capital, profitably to increase their business every year; or, not doing this, is it possible for

them safely to invest their remitted interest every year in other people's enterprises,—especially when these others are subjected to the same necessity? It is evident that business conditions, even if this reduction of interest takes place, are oppressive; they force the long-time debtors, and all *entrepreneurs* using borrowed capital to increased business or to increased lending (with increased risks); and among them, perhaps, many will be led on to undertakings beyond their individual capacity. Thus, at best, the conditions are distressing to the wise; and, as we have seen, to the unwise, who perhaps constitute the majority, they are ruinous.

Then there is the case of long loans made by municipalities for definite purposes, say to build a reservoir, or by state governments, as to pay war expenses, where there can be no question about the government increasing its business, since it has no money-making business. What the government ought then to do would be to raise taxes sufficient not merely to pay the 3.96 per cent. money interest, but to cover 5 per cent. commodity interest; and it ought to save the difference, putting it out at the same interest, or buying up its own bonds at par, thereby forming a sinking fund against increasing the loan (in commodity). If it does not,—and it is not likely to do so,—it is practically increasing its debt every year without increasing its capacity to meet it, through its omission to tax sufficiently; although the appearance is all along that it is taxing sufficiently if it pays its expenses and the interest and forms the ordinary sinking fund for paying off the principal. It may be said that individuals in the state can save the amount spared them in the lowered taxes and put it into their business or out at interest. But will they? Some may; others certainly will not. The condition of the working of the corrective will not be fully observed.*

Thus the corrective does not practically succeed, even

*The British debt of about six hundred and fifty millions of pounds was all in existence eighty years ago. If money had been appreciating since then 3 per cent. every year, this debt would now be equivalent to one of very nearly seven billions of the original pounds (things that then sold for a pound now selling for slightly less than two shillings). Can we believe that, the interest having been properly reduced, the British people would have saved and accumulated so much capital, and have found profitable employment for it, as to be able to support this debt as easily as they now do?

though it be practically applied,—that is, even though the rate of money interest does fall to the extent required. Whether this fall will take place is also a question, which may be examined under the second of the main questions.

(2) Will the long-time creditor submit to the condition of foregoing some of his present interest in view of the future compensatory accumulation of his capital in commodity value, which will take place anyhow? The answer can only be inferential. He will probably accept some reduction, but not to the full extent demanded by the theory, and with greater shortcoming the greater the appreciation and consequent demand for reduction.

The capitalist, we should notice, is assured of so much commodity interest according as the standard is appreciating, even if he merely holds his money; while the borrower, by the mere fact of his agreeing to repay the same money principal, is already bound to pay that amount of interest. Under these circumstances the money-holder is plainly in a much better position relatively to the applicant than he is under the stable standard where no interest is assured him except what he bargains for. Now, there is one case where it is absolutely certain that the lender will demand, and, if borrowing takes place at all, will get, a higher rate of interest than the theory allows. If the normal rate of commodity interest were 3 per cent. and the appreciation of the standard also 3 per cent. a year, the corrective interest would be zero, and then the owners of capital would have no inducement to lend their money unless they were offered *some* rate of interest, which, whatever it be, must be above the proper corrective rate.* One may refuse to consider what would happen under such circumstances.† But the law of continuity demands that if a

* In the monograph on *Appreciation and Interest*, published by the American Economic Association (August, 1896), Professor Irving Fisher points out that owners of commodity, *e.g.*, wholesale dealers, in their trade with retailers, could afford to loan their wares for no money interest if they are depreciating in money value at about the same rate as is the normal rate of commodity interest (chap. vi.). But this applies only to such loans, and not even to the discounting of them. It does not apply to long loans, which are almost always of money or of claims to money.

† Professor Clark notices the possibility of such a situation and admits that then the fall in prices "could not be counteracted by changes in the rate of

theory is correct it should not suddenly go to pieces before a supposition which differs only in degree from the ones in which it is claimed to hold. If we argue in conformity with this law from the certain case to others, we see that as here the conditions would lead to more than the proper rate of interest, so too they would when the reduction required is large, but to a less extent, and so finally even when it is small, though to a much smaller extent.

This means that in practice the full corrective in the lowering of money interest would never be applied; and this means that, under the steadily appreciating standard, all debtors—among whom the long-time ones are already suffering under the oppressive need of perpetually increasing their business or their lendings in order to counteract their increasing borrowings—would not get the whole compensation which the theory promises.

To bring out more clearly still the difference between what happens under the appreciating standard and what happens under the stable standard, to show more plainly how the movement of the standard does affect the relationship between debtor and creditor in spite of the best corrective that can be offered by a change in the rate of interest, it may be well to notice briefly what would happen in the opposite case under a depreciating standard. Let us suppose, then, that, as before, the normal rate of commodity interest is 5 per cent., and that there is depreciation of money 1 per cent. annually. The proper rate of money interest as demanded by the theory would be 6.0606, say 6.06. A man borrows a hundred dollars, converts them into a hundred commodity units; these yield him at the end of the year, for interest-paying purpose, five commodity units; he has a total of 105, worth (at \$1.0101 apiece) \$106.06, pays \$6.06 as interest, and has left \$100 or 99 commodity units. These yield at the end of the second year 4.95 commodity units; he has a total of 103.95, worth (at \$1.0203) \$106.06, pays \$6.06 as interest, and has left \$100 or

interest" (Juno, 1896, p. 238, note). But he seems to consider this abnormal and only temporary, as when a country is passing from a depreciated paper to a gold standard, and not deserving of further notice.

98.01 commodity units. And so on, his money capital remaining intact, his commodity capital diminishing by 1 per cent. every year. This means that the debtor can pay his interest and repay the principal even though his business decreases in volume; and, if he keeps it at the same volume, he will be a gainer thereby in spite of the increased interest. Of course, as shown by the theoretical working out of the matter, it is in this case the increased interest (the commodity interest is at the end of the first year 6 units, at the end of the second 5.98, and does not come down to 5, the normal rate, till about the nineteenth year), which causes the diminishing volume of business, just as, in the case of the loan under the appreciating standard, it was the decreased interest (also in commodity) which permitted increasing the volume of business. But, in actual practice, the borrower under the appreciating standard may not exert himself to increase the volume of his business, or, if he tries, may not succeed, and so may come to grief; while under the depreciating standard he will exert himself to keep up the volume of his business (for the sake of his own profit), and so will be led to economize at first; and he will find himself a gainer in the end. And, even if he does not succeed, he will not suffer loss, provided the volume of his business does not decrease by more than 1 per cent. a year. All this on the supposition that the theoretically demanded money interest obtains. On this supposition it is apparent that the *entrepreneur* who borrows under the appreciating standard has an easier time of it at first if he omits to observe the conditions imposed upon him, with loss showing itself later; but under the depreciating standard the borrowing *entrepreneur* necessarily has a harder time of it at first, with prospect and likelihood of easier times ahead. This would lead to the inference that under an appreciating standard there would at first be a rush into various enterprises of borrowers desirous of taking advantage of the low rate of interest, but after a while the disasters of these would discourage others; while under the depreciating standard *entrepreneurs* would at first hold aloof from borrowing, but after a while, perceiving the success of those who have ventured, would more and more enter the lists. But this, it must be remembered, is only on

the supposition that the theoretically demanded money interest is actually ruling in the market. On this supposition again it is apparent that, under the depreciating standard, the creditor is every year having his capital repaid him in the excess of interest, by what the French call *amortissement*; so that his investment is every year diminishing (in commodity). Hence there is justice also here, although the repayment is made in money worth less than was lent. If he is wise, he will not spend this extra payment as if it were income, as though the rate of commodity interest had risen, but will regard it as capital and reinvest it. If he is not wise, the dwindling of his capital (in commodity value) is due to his spending it, and is his own fault.

Thus the relationship between the debtor and creditor is under the depreciating standard the reverse of what it is under the appreciating standard. Under the appreciating standard the borrower is left with the option of saving or not, and if unwary or if not permitted by circumstances, will not, and will suffer; while, if the theory be carried out, the creditor is compelled to save and to accumulate, the reinvestments being made for him by his debtors. Under the depreciating standard, however, the option lies with the creditor, who may spend or not what is thus returned to him of his commodity capital, and, if unwary, will consume his capital and will suffer; while the debtor, if the theory is carried out, is compelled to pay back the loan partly every year in addition to the (normal) interest, and therefore is every year being freed from his debt (in commodity, although still owing the same money amount).^{*} Under the appreciating standard the debtor has to form the peculiar sinking fund against the increase of his debt; but under the depreciating standard it is the creditor who has to form a similar sort of sinking fund against the decrease of his investment. Thus the appreciating standard throws the extra need of caution and the extra trouble of increasing one's business or investments upon the debtor, and all the hitches which in actual practice must occur are inconveniences to him; while the depreciating standard throws the

^{*} Thus the depreciating standard of itself forces the borrower to do exactly what a good Mentor would advise all borrowers to do.

extra caution and the extra trouble of reinvesting upon the creditor, and all the hitches in actual practice are to his inconvenience. That the one of these standards is favorable to debtors, the other to creditors, is evident, and this even on the supposition that the theory of corrected rate of interest is complied with.

But we have seen in the case of the steadily appreciating standard that the rate of interest is not likely to be fully adjusted. The same probability exists in the case of the depreciating standard; for here it is the holder of money who is at a disadvantage in the bargaining for interest, as he is bound to lose unless he invests his money. This means, in the light of theoretical correctness, that the debtor is likely under the appreciating standard to pay too much, and under the depreciating standard to pay too little. Hence, it might be said that injustice is done to the debtor in the one case, and in the other to the creditor. But it is well not to speak of injustice where contracts are to be performed that have been entered into by responsible men with their eyes open.* The true way of looking at the matter is to state that the economic conditions are different under the two standards,—that under the steadily appreciating standard they are such that the rate of commodity interest (including the final repayment) is apt to be higher, and that under the steadily depreciating standard they are such that the rate of commodity interest (including the final repayment) is apt to be lower, than would be the rate of interest under the stable standard, other things being the same. The rate of interest under the stable standard is best because under it people see exactly what they are doing and that is done which they intended. But under each of the other standards things are demanded that are not demanded under the stable standard; and people do not as a rule see what they are doing, and what takes place is different from what they expected.† They are both of them bad

* The case is different where, *after* the contract, there is a change in the movement of the value of the standard.

† It is true that under the stable standard there are variations in the prices of single articles, and manufacturers and merchants mostly deal in a few articles. But these variations exist also under the other standards, and have added to them the additional variation due to the change in the value of the monetary standard.

standards, therefore; but of the two the appreciating is better for creditors and the depreciating better for debtors.

This conclusion, it should be borne in mind, is reached *both* on the supposition that the theory of altered interest is fully carried out, *and* on the supposition, which has greater probability for it, that it will not be carried out, in actual practice.

There is only one corrective that would perfectly restore under the appreciating or depreciating standards, however steady they be, the same conditions as under the stable standard. This is the making of loans so that the interest every year, and at the end the capital, should be paid in sums reduced or increased proportionately to the appreciation or to the depreciation of the money. This is the system aimed at by the advocates of the multiple standard, whose plan, too, would equally counteract fluctuations in appreciation or depreciation, and would also apply to salaries and to rent, to which Professor Clark's theory makes no pretence of being applicable. This is not a natural and automatic system, but most essentially an artificial one. Professor Clark offers his theory as showing the superfluousness of that artificial system; for his theory claims that a corrective at least against *steady* appreciation and against *steady* depreciation already exists and is naturally and automatically applied.

The present criticism is offered to show that the corrective which Professor Clark regards as satisfactory against the evils of a steadily appreciating standard would only be partially applied, and, even if wholly applied, would not by any means be a satisfactory corrective. If, then, we have at present an appreciating standard, even though it were one steadily appreciating, the conclusion would seem to be that we must either apply the multiple-standard system or do something (with risk of other ills) to prevent the appreciation, or suffer bad consequences. We must not flatter ourselves with the optimistic view that a natural corrective exists, and is already operating or about to operate.

C. M. WALSH.

THE TAXATION OF SUGAR IN THE UNITED STATES, 1789-1861.

THE sugar tariff of the period before the civil war, like that of the present, was primarily for revenue, and incidentally or secondarily for protection. But, although similar in its main features to the tariff of our own time, it presented in some respects different and less difficult problems. As a source of revenue, it was much less open to the charge of weighing heavily upon the poor; as a protective measure, it did less towards promoting or preserving great inequality in the distribution of wealth. It is the object of the present paper to show the nature of the use of the tax for revenue purposes, to point out the extent and probable effects of the protection which the tariff afforded, and, finally, to give an account of some of the curious administrative difficulties to which it gave rise.

Of the sugar tariff as a source of revenue not much need be said. It was relied upon to almost as great an extent as in recent years. During the Federalist administrations it seems to have been looked upon as a ready resort in case of unlooked for need, the rate being changed no less than seven times between 1789 and 1800. In the succeeding years the changes were less frequent, the rates remaining unchanged from 1800 till 1812, when they were simply doubled along with the other duties. After the reduction of the war rates in 1816 there was again no change until 1832; while the later changes of 1833, 1842, 1846, and 1857 followed the general course of the tariff acts of those years. The comparative stability which the sugar duties enjoyed seems, however, to have been due to the lack of necessity of any changes rather than to any disinclination to make them. The direction of all the changes which were made, with the possible exception of that of 1846, was governed by the needs of the Treasury at the time; and there were but few revenue measures passed which did not touch to some extent the sugar duties. The

customs revenue from sugar varied from three per cent. to thirty-nine per cent. of the total customs revenue,—a considerably greater variation than that between 1861 and 1891, when the percentage ranged from fourteen to thirty. The fluctuations, however, were not so great as might be inferred from these extremes: only twice did the percentage go above twenty, and only six times did it go below seven.

As a protective measure, the tariff, then as now, affected both sugar-growing and sugar-refining. The production of sugar in the United States has always been confined almost wholly to the State of Louisiana, while refining has been carried on in the great seaboard cities, especially Philadelphia, New York, and Boston. Protection was afforded to the sugar producers practically to the full extent of the duty on raw sugar, since the domestic product has never been sufficient to supply our total consumption. Protection has been afforded to the refiners by what has been known in recent years as the "differential" on refined sugar; that is, by a rate on refined sugar, not only higher absolutely than on raw sugar, but higher relatively to the difference in value.

In 1789 there was obviously no occasion for a protecting duty on raw sugar; and even when Louisiana was purchased, in 1803, sugar-making in the Territory was practically only eight years old. The cane had indeed been cultivated for many years; but the planters had not succeeded in bringing the juice to granulate, and hence had produced only molasses. In 1795, however, a retired French officer had succeeded in the granulation of sirup, and the cane at once began to be cultivated largely. Exact figures for the product of these early years are not obtainable. The Committee of Manufactures of the House of Representatives, however, in December, 1803, spoke of "forty-five hundred casks of sugar, one-half ton each, being exported annually from New Orleans and vicinity." We know, too, that a refinery had already been established there. All accounts agree that the industry was a rapidly growing one; and it probably was stimulated by the rise in the price of the sugar, which the transfer of the Territory to the United States presumably brought with it. The protection

thus afforded seems, however, to have been enjoyed for a time in comparative silence, for the first reference to it is not earlier than 1815. In that year a memorial was presented to Congress by sundry planters, praying that the high duties of the war be retained as protection to the producers. The war duties were not retained; but that they were not reduced to so low a point as they had been before the war may have been partly due to this prayer.

In these years the confident expectation was that we should soon be able to produce all our own sugar. Not only was the cultivation rapidly extended in Louisiana, but it was tried, at first with great prospects of success, in Georgia, South Carolina, and North Carolina. A small refinery was at one time established in Charleston. Numerous references to these experiments in the pages of *Niles's Register* indicate the interest which was taken in the matter. It was even predicted that Europe would one day look to us for sugar, as she was then beginning to do for cotton, it being pointed out, in support of this view, that cotton had been imported into the country in the years immediately succeeding the Revolutionary War. In calculations as to the prospects of the industry, the import duty was freely referred to as one of the advantages of the home producer over the West Indian.

The planters do not seem to have urged any increase in the duty. Indeed, it is interesting to observe that even before the war the sugar producers pursued that defensive rather than offensive policy which has especially distinguished them in more recent years of, in general, aggressive protectionism. They quietly enjoyed what protection the duty afforded, rarely asked for more, but stoutly objected to any decrease. The Congressmen from Louisiana even adopted a somewhat apologetic tone in referring to the matter, an attitude doubtless arising from the political isolation in this respect of Louisiana, the South generally having become, as early as 1820, decidedly opposed to protection.*

*The only time when an increase of duty seems to have been asked for was in the years immediately succeeding the crisis of 1837-39, and even then it was a return to the rates in operation before the compromise act of 1833 that was desired. A memorial, urging this, which was presented to Congress by some sugar planters.

The earliest complete data of the product of Louisiana are for 1823. It will be seen from the appended table at once how unstable and how considerable, compared with the imports, the product was. In 1823 it was a little over half as great as the imports; in 1828 it was nearly twice as great; and, in 1829, about five-sixths. There was an irregular growth in the decade 1830-40, but the proportion to imports did not increase. During this decade there were great improvements in the process of sugar-making on the estates. The use of steam was very largely substituted for that of horse-power, more than half the estates using steam in 1841-42 as against only one-third in 1828. With this change went a process of amalgamation on a considerable scale, the total number of estates decreasing from 691 in 1830 to 668 in 1841-42 in the face of an increase in the number of slaves from 36,000 to 50,670.* During the greater part of the forties the domestic product exceeded the imports, and it might well have seemed in 1846 or 1847 that the United States would be able before long to produce all she consumed. In the succeeding decade, however, although the domestic product continued to increase, the imports grew even more rapidly; and in the year 1853 only was the domestic product equal to the importation.†

The question of protection to the refiners arose earlier than that of protection to the producers. There seems to have been, however, much more conscious effort to afford them protection. The business of refining had been encouraged by the

in 1842, shows that the argument for protection to American labor, which first became prominent in tariff discussions about 1840, had already been applied to the slave labor of Louisiana. The memorial quotes from Jefferson "on the subject of protecting the labor of our own people," and speaks of "effectively guarding our sugars against debasement by foreign labor." *Sen. Doc. 334, 27 Cong., 2d Sess.*

*Secretary Walker's Treasury Report of 1846, *House Exec. Doc. No. 6, 29 Cong., 1st Sess.* Appendix, p. 712 seq.

†The following table gives the product of Louisiana and the imports of sugar for each year from 1823 to 1861. The exact number of pounds of the domestic product is not known, the figures being in terms of hogsheads only, which varied in weight from less than 1,000 to nearly 1,400 pounds. For greater convenience of comparison, I have multiplied the number of hogsheads by 1,137 (the average weight of the hogshead), giving the figures, approximately, in pounds. The figures of the imports are (1823-42) from the Appendix to Walker's Report of 1846 and (1843-61) from the Commerce and Navigation Reports. Those for the product

State of Pennsylvania* through a differential duty on refined sugar; and the industry there had already developed to very considerable proportions when the government under the Constitution began, the greater part, apparently, of the refined sugar consumed within the country being the product of the Philadelphia refiners. The act of 1789, however, seems not to have contemplated any protection for the refiners. The sugar tariff was introduced by Madison in his revenue bill, not by Fitzsimmons in his protective measure. The rates proposed — one cent on raw sugar and three cents on refined sugar — were objected to by the friends of the refiners on the ground that they did not afford any protection. The refiners were unable to secure an increase, however; and the rates as proposed were enacted.

But the interests of the refiners did not continue to be ignored. The need of the government for more revenue caused an increase in the rates in the very next year; and the rise was greater in the case of refined than in that of raw sugar (two cents as against one-half cent). In 1794 an excise tax of two cents per pound was laid on all sugar refined within the United States. This tax was strongly objected to on various grounds. The sugar-refining industry, it was said,† was in an infant state in this country, and ought to be fostered

of Louisiana are from the *American Almanac*, 1881, there said to be statements of Bouchereau.

Year.	Imports (million lbs.).	Product in Louisiana (million lbs.).	Year.	Imports (million lbs.).	Product in Louisiana (million lbs.).
1823	60.7	34.1	1843	71.3 (9 mos.).	113.7
1824	94.3	36.3	1844	186.8	237.4
1825	71.7	34.1	1845	115.6	213.0
1826	84.9	51.1	1846	128.0	159.6
1827	76.7	81.3	1847	204.0	273.6
1828	56.9	100.0	1848	257.1	260.8
1829	63.3	54.3	1849	252.3	282.6
1830	86.4	No data	1850	218.4	240.7
1831	109.0	No data	1851	380.4	269.6
1832	66.4	79.5	1852	457.5	266.9
1833	97.6	85.2	1853	464.4	512.2
1834	115.3	113.7	1854	455.9	295.1
1835	136.0	34.1	1855	473.8	263.8
1836	191.4	79.5	1856	545.2	83.5
1837	136.1	72.9	1857	778.9	318.7
1838	183.8	79.5	1858	519.2	413.0
1839	185.2	131.1	1859	655.8	260.6
1840	120.9	99.3	1860	694.8	251.8
1841	184.2	102.6	1861	809.7	523.7
1842	173.8	159.6			

* Macleay's *Journal*, p. 56.

† Muhlenberg, in the House, *Annals of Congress*, vol. iv. p. 716.

by the government and protected against the drawback paid by England, which amounted to a bounty. The phrase "infant state" was carefully explained in a vigorous pamphlet prepared on the occasion. The industry was in an "infant state" only in comparison with similar establishments in Europe. The American refiners were perfectly capable of supplying the whole consumption of the country. As a result of this protest, a clause was inserted in the bill, laying an additional customs duty on refined sugar,—not, however, of two cents, to equal the excise, but of four cents. The net differential in favor of the refiners was now about two and a half or three cents, supposing that two and a half or three cents were necessary to offset the difference in value between raw and refined sugar.* The effect of this protective legislation was almost immediately seen in the changes in imports. The imports of refined sugar, which had been one hundred and eighty-four thousand pounds in 1790 and two hundred and sixty-five thousand in 1791, fell off rapidly to fifty-five thousand in 1795, and by 1800, notwithstanding a slight decrease of the differential, to ten thousand pounds.

It must be said that there are some indications that these high rates on refined sugar were not wholly due to protective influences. A few members of Congress favored protective legislation on principle: some others were in close personal contact with the refining business.† The rank and file of the members, however, seem to have voted for high duties on the refined article mainly because they thought they were in this way taxing luxuries.

We should hardly think at present of a tax on refined sugar as a tax upon the rich. On the contrary, such a tax is chiefly objected to now on the ground that it weighs especially upon the poor. The consumption of sugar in the United States in 1894 was sixty-six pounds per capita, practically all of it refined sugar. Nor was the consumption confined at all to the

* Cf. Maclay, pp. 53-57, for what had been thought necessary in 1790.

† Muhlenberg, of Pennsylvania, for instance, the Speaker of the House, took an active part in discussing the sugar schedules. His name also appeared at the head of the signatures to a memorial presented to Congress by the sugar refiners of Philadelphia.

well-to-do. A century ago, however, the situation was widely different. In 1800, in place of sixty-six pounds, the per capita consumption of sugar of all kinds was only about nine or ten pounds. A great many families used scarcely any at all. In New England, where molasses was imported in large quantities for the manufacture of rum, it was also widely used as a substitute for sugar. Of the sugar that was consumed, moreover, only a small part was refined, the greater part being clayed sugar, or raw sugar which had been freed of a part of the impurities and molasses by allowing the water from a layer of moist clay to percolate through it. Such sugar was much like the poorer grades of the brown sugar used to some extent ten or fifteen years ago, which have now disappeared from the market. Refined sugar was a luxury to be afforded only by the well-to-do.

In conformity with this difference in what may be called the social position of refined sugar we find the tax on raw sugar—and more commonly still that on molasses—spoken of as falling on the poor, while the tax on refined sugar is referred to as one affecting those who are well able to pay it. In 1802 a vigorous although unsuccessful effort was made to save the excise duty on refined sugar from the general wreck of the excise system, and to repeal instead the import duty on brown sugar, the argument in favor of this course being placed on the ground of a "discrimination between the necessities and luxuries of life."* On the other hand, the excise tax of 1794 was objected to because it "partook of the nature of sumptuary legislation." It is probable, therefore, that in the minds of the greater number of Congressmen a higher duty on refined than on raw sugar was suitable to the different class which consumed the former, and that little attention was paid to the protection which the higher duty gave the refiners. The latter consequence was not, however, without recognition in Congress, even by those not favorable to the refiners. A few years later, in 1803, the Committee of Manufactures spoke of this effect of the duties, and concluded by saying, "Sugar-refining has been more favored

*Dennis of Maryland, *Annals of Congress*, vol. xi. p. 1015.

by the government than, perhaps, any branch of domestic manufacture."*

For more than thirty years after 1800 the differential remained so high as to be well-nigh prohibitory. The comparative insignificance of the imports of refined sugar may be seen when it is said that the excise tax of two cents yielded more in dollars between 1795 and 1802 than there were pounds of refined sugar imported during the same period. The figures for 1813-15, when the excise was revived, show an even smaller proportion of imports. Unusually heavy imports in other years, especially 1807-8 and 1816, seem to indicate, on the other hand, that the refiners were not at all independent of the duty.

The reduction of the duties in 1816 slightly decreased the differential; but the next change, which was not until 1832, was in the opposite direction, the rate on raw sugar being reduced, while that on refined was not touched. Moreover, considerable improvement had now been made in the process of refining, filtration by means of bone-black having been introduced;† and, as a consequence, the difference in value between the raw and refined sugar was less than it had been. It was not, therefore, until the compromise act, with its gradual scaling down of the duties, that the differential was appreciably reduced, and not until the later years of that act's operation (1840-42) that the decrease was very marked. Long before this, however, the refiners had become independent of the duty, and were even exporting sugar in large quantities, under the stimulus, as will be seen presently, of a bounty on exportation. The revival of the differential in 1842 and its final disappearance, until a much later period, with the simple *ad valorem* duty of 1846, seem not to have exercised any influence.

It can be seen from the foregoing exposition that the

* *State Papers, Finance*, II. 74.

† The essential features of the sugar-refining process have undergone no change since the introduction of bone-black into the industry in 1812. The remarkable cheapening of the process of refining which has been made during the last half-century, and especially during the last twenty years, driving the old raw sugars out of use, and more than trebling the consumption, has come about through the perfection of mechanical arrangements and the minimizing of waste brought about by large capital and production on a great scale.

weight of the protective features of the sugar tariff rested, during the greater part of the period under consideration, on the other side of the scale from that on which it has rested in recent years. It was, to be sure, to the refiners that protection was first given. The refining business was for the most part, however, independent of the tariff; and, on the other hand, the industry was a comparatively unimportant one. Its product was much smaller in relative amount, and much less widely distributed among the various classes of the community, than at present. It was to the producers of raw sugar, therefore, that the tariff afforded by far the most important quota of its protection, supplying a very efficient aid to them in their almost even contest with the foreign producers for the American market. The civil war destroyed their industry; and, although in the thirty years which have elapsed, they have regained and even somewhat surpassed the product of 1861, the growth of the country has been so great, and the increase in sugar consumption so much greater still, that an amount which was at the earlier period about one-half of our consumption forms now only about one-tenth. A change of an opposite sort has taken place in the case of refining. This industry is now, as formerly, capable of holding its own against foreign competition. The concentration of the industry in a few hands has, nevertheless, by removing to a great degree competition from the domestic market, rendered the size of the differential not without its importance to the refiners; while, owing to the great extent and wide diffusion of the consumption of the product, its effect on the price has become a matter of great interest to the body of the people.

In many respects a much more interesting phase of the sugar tariff of the period under consideration is that which connects itself with the exports of refined sugar for benefit of drawback. Of the exports there are two classes. A part is imported and re-exported without change of form; a part undergoes the refining process before re-exportation. The former class was much more important in the first quarter-century of the republic than it has been in recent years. During some years of the Napoleonic wars the amount thus

exported exceeded considerably the total amount consumed within the country. But this movement is of interest chiefly in its relations to the political and economic history of that exceptional period. No difficulty could be experienced in determining the amount of drawback to be paid. It was a simple matter of paying back, pound for pound, what had been collected.

With respect to domestic refined sugar, on the other hand, the adjustment of the drawback has always been a matter of considerable difficulty. In the refining of sugar there is inevitably some waste. To determine, therefore, the exact amount of duty which has been paid upon a pound of refined sugar, there is necessary a minute examination into the whole process of refining. Moreover, since improvements in the process of refining are constantly being made, lessening the waste of the process, the drawback must be continually readjusted in order to yield an exact equivalent of the duty.

It was probably owing partly to the difficulty of adjustment, and partly to the insignificance of this class of exports, that no drawback was allowed until 1794, although recommended by Hamilton in his Report on Manufactures as early as December, 1791. By the act of 1794, imposing an excise tax, it was provided that that tax of two cents should be drawn back on exportation, and three cents per pound should be added to cover the import duty. As the duty on raw sugar was then one and one-half cents, this indicates a rough calculation that two pounds of raw sugar were required to produce one of refined. Upon additions being made to the import duty in the years immediately following, the same policy was pursued with respect to the drawback, twice the amount of the duty being regularly added.

Under this drawback, exports took place only to a slight extent. In 1796, \$20,000 was paid in drawbacks; but the amount fell off immediately, and did not again exceed \$15,000 until 1802. With the repeal of the excise taxes in 1802, the whole of the drawback disappeared. Naturally the manufacturers protested, and urged the continuance of the amount intended to cover the import duty. The subject was carefully investigated by the Committee of Manufactures of the House,

and in December, 1803, an adverse report was made. The admission of Louisiana, it was said, brought a new and disturbing element into the problem: the domestic product could not easily be distinguished from the foreign, and might receive the drawback intended only for the latter. Moreover, the committee took care to add, the sugar-refining business had already been greatly fostered by the government.

In 1813, when the excise was revived, a drawback equal to the tax (four cents) was allowed, and by act of April 30, 1816, an addition of four cents was made with respect to all sugar upon which an import duty had been paid. Upon the repeal of the excise tax in 1817, that part of the drawback disappeared and the drawback continued at four cents until 1829. As the duty was now three cents on raw sugar, this was not so favorable a drawback as the previous one. The refiners repeatedly asked to have it increased to double the amount of the duty,—that is, to six cents; but their requests were not much attended to until 1828. In that year a bill was introduced into the House by the Committee on Commerce, granting, as a sort of compromise, a drawback of five cents per pound. After considerable debate, in which the whole subject of drawbacks was gone into at length, the bill passed and became law in January, 1829.

The drawback of five cents seems to have been adjusted with great accuracy. The evidence adduced by the committee* showed that, while it required very nearly two pounds of raw sugar to produce one of refined, there was a certain by-product of molasses and inferior sugar which was not devoid of value, and which, if the drawback were fixed at six cents, would entirely escape the duty. There was an immediate increase in the exports, which had in the preceding years been very slight. Had conditions remained unchanged, no undue advantage would have accrued to the exporters on account of the drawback.

Events soon occurred, however, which served to turn the drawback into a bounty. About a year after the passage of the act, certain importers of raw sugar conceived the idea of evading the tariff by importing sugar in the form of sirup.

* *House Report No. 51, 20 Cong., 1st Sess.*

The first step in the refining process consists in dissolving it in water, making what is called "sirup of sugar." As this "sirup" contains only about one-eighth part of water, it is practically only another form of sugar. The duty on sirup at this time was fifteen per cent. *ad valorem*. The specific duty of three cents on raw sugar was equivalent (according to the price) to from seventy-five to one hundred and twenty-five per cent. It occurred to the importers that, if the sugar could be converted into sirup before importation and brought in under the fifteen per cent. duty, a handsome profit might be realized. Preparations were at once made for carrying out the idea on a considerable scale. An establishment was hastily erected in Cuba, where sugar was received in packages and converted into sirup. The plan worked smoothly for a short time only. The sirup safely passed at the low duty at New York and Boston. The collector at New Orleans, however, in September, 1831, promptly seized the first cargo entering his port on the ground that it was really sugar. Attention was thus called to the evasion; and Congress came to the rescue in the tariff act of 1832 by laying a duty by weight on sirup equal to that on sugar.*

But the end of the difficulty was not yet reached. Some of the sirup, when first entered at Boston, had been assessed as molasses, under a duty of five cents per gallon. As a gallon of molasses was ordinarily equal to about eight pounds of sugar, even this duty was a favorable one to the importer. Why could not sugar be imported in the form of molasses? In the process of making sugar the cane juice is boiled down to a certain point, when crystallization begins. The policy was now adopted of boiling down the cane juice to a point just before crystallization begins, and shipping it in as molasses. The business proceeded uninterruptedly until a new act of Congress intervened in 1842. By that act the importation of this concentrated cane juice, or "melada," as it was called, was especially provided for by a rate more nearly an equivalent of the sugar duty, and the importation of it as molasses was prohibited under penalty of forfeiture. The extent to which

*For this attempt to import sugar in the form of sirup see *Sen. Doc. 133, 22 Cong., 1st Sess.*; and *Sen. Doc. 408, 23 Cong., 1st Sess.*

"melada" was imported under the molasses duty cannot be told. The imports of molasses increased from between eight and nine million gallons in 1830 to nearly twenty million in 1840, or more than one hundred per cent. At the same time, however, the sugar imports increased by from sixty to seventy per cent., so that the growth of the molasses imports may have been in large measure a normal one. It can only be said that as many as seven refineries are known to have made use of molasses in the manufacture of refined sugar; and the scale of their operations, in this respect, was sufficient to call forth numerous letters to the Secretary of the Treasury on the subject of the molasses duty.*

It may readily be seen that one effect of this evasion of the duty was an added inducement to the exportation of refined sugar. A similar effect was produced by improvements in the process of refining which were all the time being made. In 1829 the assumption had been that forty per cent. of the raw sugar was wasted. In 1842, when a readjustment of the drawback was made, it was found that the waste was then only about twenty-five per cent.† It was in a manner precisely similar to this that the present huge system of sugar bounties in Germany arose.

But the gains which arose from evasions of the duty and improvements in the refining process were insignificant when compared with those which the negligence of Congress afforded. It has already been seen that in 1829, when the drawback was raised to five cents, the duty on raw sugar was three cents. In 1832, however, it was reduced to two and one-half cents; and by the compromise act of 1833 it was subjected to a further gradual reduction which brought it, by 1840, to less than two cents, and by January, 1842, to about one cent. During all this time the drawback continued at five cents per pound. The effect of this, together with the evasions and improvements above mentioned, was a rapid increase in the exports of refined sugar. The extent and nature of the increase may be seen from the appended table giving the

* See especially *Sen. Doc. 12, 28 Cong., 2d Sess.*, and the Appendix to Walker's Report of 1846; also *Sen. Doc. 467, 29 Cong., 1st Sess.*

† *Sen. Docs. 12 and 165, 28 Cong., 2d Sess.*

amounts paid in drawbacks for each year.* The large exports did not fail to attract some public attention. Letters in regard to the matter poured in upon the Secretary of the Treasury from collectors of customs and private citizens. The attention of the Senate was called to the matter in 1840 by Senator Benton; but no action was taken further than a call upon the Secretary of the Treasury for information.

In 1842 a new policy was adopted. Heretofore the drawback had been fixed by statute. It was now placed in the hands of the Secretary of the Treasury, with the simple provision that the drawback should be equal to the duty paid and no more, and that it should be fixed under such regulations as the Secretary prescribed. The change was evidently a wise one. More recent experience has shown that even this method of fixing the drawback is not proof against mistakes. A mistake once made, however, is not likely to remain so long uncorrected as if it were necessary, for that purpose, to bring the cumbrous machinery of legislation into operation. In accordance with the law, the Secretary, after careful inquiries, fixed the drawback at three and one-half cents per pound, the duty by the new act having been increased to two and one-half cents; and the drawback difficulty was put to rest, not to appear again until the lapse of thirty years had brought new conditions and new problems.

CHARLES S. GRIFFIN.

*Drawbacks paid on domestic refined sugar exported, 1825-45: *Sen. Doc. 309, 26 Cong., 1st Sess., and Sen. Doc. 84, 29 Cong., 1st Sess.*

<i>Year ending Dec. 31.</i>	<i>Drawback paid.</i>	<i>Year ending Dec. 31.</i>	<i>Drawback paid.</i>
1825	\$1,612	1836	\$83,768
1826	2,637	1837	100,642
1827	5,534	1838	145,494
1828	2,045	1839	357,488
1829	45,092	1840	523,263
1830	84,230	1841	633,536
1831	63,688	1842	89,447
1832	42,540	1843	8,426
1833	34,643	1844	71,861
1834	162,086	1845	74,371
1835	42,829		

NOTES AND MEMORANDA.

THE DIFFERENT MEANINGS OF "COST."

The word "cost," as is well known, has at least four different senses: expense, waste, pain, and loss of opportunity. The distinctions between these meanings have been well brought out by many writers; most succinctly, perhaps, by Professor Giddings. The relations between them have been less discussed. I am inclined to think that a study of these relations may settle some economic controversies which would otherwise prove endless.

With this purpose in view let us look at the different meanings of the term "wealth." In the first place wealth may be regarded either in its public or private aspect. In the former it is an aggregate of things, goods, or services. In the latter it consists of titles or rights to some of those things. Furthermore, wealth, whether public or private, may be measured in two ways,—as a flow or as a fund. In the one case it takes the form of a rate, and is measured as income: in the other case it takes the form of a quantity, and is measured as capital.

We thus have four different methods of regarding wealth, each useful for some problems, and not so good for others.

Public capital,—an amount of useful things accumulated.

Private capital,—an aggregate of titles or property.

Public income,—a flow of enjoyment.

Private income,—opportunities for such enjoyment accruing to individuals.

Cost is a term opposite to wealth. It represents either a diminution of wealth-funds, or a reversal (not simply a diminution) of wealth-flows.

Measured as a diminution of public capital, it represents waste.

Measured as a diminution of private capital, it represents expense.

Measured as a reversal of public income, it represents pain.

Measured as a reversal of private income, it represents lapse of opportunity.

The first three of these points are sufficiently obvious. The fourth is more difficult, chiefly because we are in the habit of measuring private income in terms of money, and thus giving it in our minds the form of a concrete quantity in an assumed time unit rather than the form of a current, or flow.* I think it will be found on examination that opportunity lapsing is the only available reverse for opportunity accruing. Any other conception involves either a diminution instead of a reversal, or else an unworkable and unmeaning term, like "opportunities for pain." I think it will also be found that "lapse" bears the same relation to "pain" that "expense" does to "waste."

It would take too much space to attempt to indicate the bearing of these relations upon some of our present theoretical controversies. I prefer to leave this to the readers of the *Quarterly Journal of Economics*.

ARTHUR TWINING HADLEY.

CALIFORNIA AND THE DIRECT TAX OF 1861.

The payment of the direct tax levied by Congress in 1861 was effected in California under unusual conditions and by an irregular and curious process; and some account of the episode may be of interest to students of financial history. It will be remembered that Congress had allowed any State to assume its quota of the direct tax, and that California, like almost all the loyal States, took advantage of this option; though, unlike other States, which satisfied their quotas by an

* The mathematical reader will of course see that our capital conceptions represent integrals, our income conceptions differentials; that a diminution of the integral connotes a change of sign in the differential; and that the difficulty here described is simply a result of the habitual substitution of an integral between limits for a differential.

offset of their claims against the United States, California levied and collected her tax, and paid it in cash to the federal treasury. It will be remembered, also, that legal tender notes were at no time in general circulation in California. In that State gold was not, as elsewhere in the country, at a premium compared with current paper, but paper was at a discount compared with the gold in common use.*

Under these circumstances, State Treasurer Ashley conceived the idea in June, 1862, of making an exchange of the coin which might come into his hands, belonging to the federal direct tax fund, for United States legal tender notes, with the view of using them to pay California's quota. On the 1st of September, 1862, there was of the direct tax fund, in the hands of the treasurer, the sum of \$70,932.56; of which \$68,862.56 was in coin and \$1,570 in legal tender notes. Deducting from the \$70,932.56 the 10 per cent. allowed to the State by the federal government, if payment was made before October 1, the sum of \$63,839.31 was left, to be paid to the assistant treasurer of the United States.

Under date of September 1, 1862, the State treasurer addressed a letter to the assistant treasurer, informing him of the amount on hand belonging to the federal direct tax fund, and his readiness to pay the same at his office in Sacramento. The assistant treasurer answered on the 6th of September, declining to go to Sacramento for the money, on the ground that he was not authorized to receive money at any other place than his office, and suggesting that, as the act of the legislature required the money to be paid at San Francisco, the expense of transportation should be paid by the State. Two days later the State treasurer informed the controller of the amount on hand in the federal direct tax fund, and advised him that the law required payment to be made on warrant drawn by the controller. On the 9th of September the controller replied, advising the treasurer to retain the amount on hand until the November settlements with the county treasurers should enable him to make the entire settle-

* See the articles by C. F. Dunbar, on the "Direct Tax of 1861," in this *Journal* for July, 1889, vol. III. p. 444, *seq.*; and by the present writer on legal tender notes in California, in the issue for October, 1892, vol. VII. p. 1.

ment of, say, \$254,000, and then to make it in treasury notes, for the benefit of the State. The controller, on several occasions before and after this communication, had urged this course on the treasurer. About the middle of the same month Treasurer Ashley, being in San Francisco, employed the law firm of Patterson & Stow, at a stipulated fee of \$500, to give him their opinion as to the legality of making exchange of coin into legal tender notes, and of making payment of the same to the government for California's quota of the federal direct tax, on which they gave a favorable opinion. Having obtained this opinion, the treasurer entered into an agreement with I. & S. Wormser, of San Francisco, to purchase the notes for the first payment from them, at the rate of 92½ cents on the dollar. Other brokers were not consulted, for the reason, as the treasurer stated, that he did not wish to make the fact of the proposed exchange known, lest it should disadvantageously affect the market. A few days later the controller drew a warrant on the State treasurer as follows:—

\$63,639.31.

SEAT OF GOVERNMENT,
CALIFORNIA, SEPTEMBER 22, 1862.
CONTROLLER'S OFFICE.

The Treasurer of State will pay out of the Federal Tax Fund, to the order of D. R. Ashley for Assistant Treasurer United States, San Francisco, sixty-three thousand eight hundred and thirty-nine $\frac{31}{100}$ dollars. Kind of service,—State's quota (portion of) direct tax due United States. Liability accrued, September 22, 1862.

G. R. WARREN, *Controller*.

Treasurer Ashley, having received this warrant from the controller, in company with him took the money from the vaults of the State treasury, and went to San Francisco. Here Ashley delivered the money to W. W. Stow, of the firm already mentioned, taking no receipt or security from Stow for the money, and making no written or verbal agreement in the presence of witnesses concerning the nature of the trust confided, which was to keep possession of the money, and pay it out to I. & S. Wormser as fast as they should procure legal tender notes, and deliver them to Mr. Stow. The money left by the treasurer, about \$58,000, was deposited by Stow in a bank to his own credit, and was paid out, on checks drawn

by him, for legal tender notes as they were delivered by the persons who had agreed to furnish them.

On the 28th or the 29th of September the treasurer returned to San Francisco, and offered the notes, which he had collected through Stow and otherwise, to the United States assistant treasurer. The assistant treasurer refused to receive them; and the State treasurer thereupon left them with Stow, and returned to Sacramento. A little later, on the 6th of October, Assistant Treasurer Cheeseman informed the State treasurer that he was ready to receive the payment; and, accordingly, on the 8th of October the notes previously refused were received by the United States assistant treasurer, in part payment of California's quota of the federal direct tax. The amount saved in coin by this first payment in notes was \$4,486.39.

Immediately after this payment the State treasurer began to make arrangements for procuring legal tender notes to pay the remainder of the tax assumed by California; and on the 11th or 12th of October he made an agreement with Stow, by the terms of which Stow was to furnish Treasurer Ashley the notes he needed to make the last payment (\$170,836) at 88 cents on the dollar. On the 27th of December the controller drew his warrant in favor of "D. R. Ashley for Assistant Treasurer United States, San Francisco," for the balance of State's quota remaining unpaid; namely, \$183,606.10. This amount was accordingly drawn from the State treasury by Ashley,—\$12,770 in legal tender notes which had been paid in by the county treasurers and \$170,836.10 in coin. The State treasurer then took the money to San Francisco, and paid to Stow \$150,335.68 in coin for \$170,836 in legal tender notes. On the 2d of January the State treasurer tendered to the assistant treasurer of the United States, at his office in San Francisco, the sum of \$183,606 in legal tender notes and 10 cents in coin, in full payment of California's quota of the federal direct tax. The assistant treasurer refused to receive the money on that day. On the following day, payment having been offered again, the assistant treasurer again refused to receive the notes, stating that he would await the action of the legislature in the matter. On the 24th of Feb-

ruary the assistant treasurer informed the State treasurer that he would receive payment of direct tax as tendered on the 2d and 3d of January; and on the 26th of February the State treasurer made the payment, as suggested, in the currency that had been previously offered, and received a receipt from the assistant treasurer in full for California's quota of the federal direct tax.

A committee of the legislature appointed to investigate this transaction found that the treasurer of the State never consulted the attorney-general of the State upon the right or propriety of exchanging the coin into legal tender notes; but there was no evidence submitted to the committee warranting the conclusion that either Treasurer Ashley or Controller Warren derived any pecuniary benefit from the transaction. As a result of this much debated and much investigated transaction, there was a saving to the State treasury of the sum of \$24,260 in coin.

The investigating committee of the legislature made a majority and a minority report. The majority report affirmed that the laws bearing upon the mode of paying the quota of the direct tax were in almost irreconcilable confusion and conflict. The State statute of 1862, while providing for levy, collection, and payment, provided no means for full compliance with the federal statute. The latter, it was said, declared plainly and distinctly that, where a State assumed the tax, she must pay it into the United States treasury, and that the United States authorities were called upon to do nothing until the money was presented at the treasury door. The State statute, on the other hand, provided that all officers required to discharge duties relative to the assessment, collection, safe-keeping, and disbursement of the federal tax, were to be governed by the same laws, and liable to the same penalties, as in the collection, safe-keeping, and disbursement of the tax for State purposes. This law, operating upon the treasurer and controller, made it impossible for the money to be lawfully drawn out of the State treasury and paid into the United States treasury at San Francisco, unless the United States treasurer at San Francisco took some active part in the transaction, by filing his claim with the Board of Examiners and

obtaining the warrant of the controller. But these conditions were not complied with, the United States treasurer claiming, in substance, that he had nothing to do but receive the funds at his counter in San Francisco. It was pointed out, further, that the State controller did not follow the law in drawing his warrant, inasmuch as it was not drawn in favor of the United States assistant treasurer, as required. But, considering the difficulties of his position, the committee concluded that the controller acted in good faith and according to his best judgment. The conduct of the treasurer in exchanging the coin for legal tender notes was wholly unauthorized by law; yet it appeared clear to the committee that he made the exchange solely from a mistaken notion of benefit to the State.

The minority report maintained that the acts of the controller and the treasurer were not warranted by law, deprecated the humiliating position in which the State of California was placed by these acts, and recommended the following resolution, which was adopted, at least by the assembly: "*Resolved*, That G. R. Warren, State Controller, and D. R. Ashley, State Treasurer, the first in drawing warrants Nos. 210 and 735, and the latter in exchanging coin into legal tender notes to make payment of California's quota of the federal direct tax, transcended the limits of their authority, and disregarded the plain letter of the law."

The Governor (Leland Stanford) was of the same mind, and in October, 1862, wrote to the federal treasurer, "I protest against this action on the part of the State treasurer, and most earnestly assure . . . the general government that the loyal people of this State have no desire to benefit themselves at the expense of the general government." In his message to the legislature in January of 1863 he again publicly disavowed the action of the State officials. The people of California, it is safe to say, were nearly of one mind in repudiating the transaction.

BERNARD MOSES.

With its issue for March, 1897, the *Charities Review* enters on its sixth volume, in new dress and under new auspices, and with assurance of wider interest and greater usefulness. Mr. Frederick H. Wines assumes editorial charge, and has the assistance of a committee of nine equally competent associate editors. Though still published by the Charity Organization Society of New York, the *Review* will henceforth be the organ of no association and of no interest; and, while still giving much attention to the question of organized charity, its field will include the whole social question from its philanthropic side. The magazine *Lend a Hand* has been united with it. Twelve numbers a year are promised, at a subscription price of \$2.00, which may be remitted to the *Charities Review*, 105 East 22d Street, New York.

IN *Bradstreet's* for January 23 of the current year, some statistics, collected by the agency which gives its name to that journal, are given as to commercial failures over a series of years in the United States and Canada. The information so brought together is of interest to economic students, and the main results are here reproduced.

The total number of enterprises of which account was taken, and the number of failures, since 1891, were as follows:—

	Enterprises.	Failures.
1891	1,903,610	14,240
1892	1,127,424	11,592
1893	1,136,662	17,289
1894	1,120,995	14,588
1895	1,134,299	14,874
1896	1,162,048	17,298

The figures thus would indicate an annual ratio of failures to businesses of one per cent., more or less. But these were the overt failures only, in which there was loss to creditors. With them should be considered the much more numerous cases in which the field was abandoned from want of success,

though all debts were met. The records from which the information comes as to overt failures give a general clew, though no precise figures, as to the other cases also. It would appear that about 100,000 businesses were annually given up because of lack of success, even though with no failure to pay outstanding obligations. Taking the two classes together, there is a general commercial death-rate of something like eleven per cent.

The effect of the crisis of 1893, and the years of depression that followed, appears plainly in the record of failures. But it appears more strikingly still in certain figures as to the commercial repute of the bankrupt enterprises,—figures which are further interesting as indicating how far the commercial agencies are successful in reporting the condition of the particular businesses. The failed enterprises were divided into three classes, according to their rating on the books of the agency; and the proportion of each class in the total of failures was then computed thus:—

	VERY MODERATE OR NO CREDIT. <i>Per cent.</i>	GOOD CREDIT. <i>Per cent.</i>	VERY GOOD CREDIT. <i>Per cent.</i>
1889	92.0	6.6	1.2
1890	91.9	6.3	1.6
1891	91.2	7.1	1.7
1892	93.0	5.9	1.1
1893	69.7	27.1	3.2
1894	71.0	27.4	1.6
1895	72.3	26.2	1.5
1896	71.7	25.5	2.8

The proportion of failures (shown in the second column) among those whose credit was good, even though not of the best, increases with the crisis of 1893 and the succeeding years of depression. The shock and the trying times that followed caused the collapse of many enterprises, most of them doubtless really unsound and likely to succumb sooner or later, whose commercial rating had yet remained respectable, and who had been able to hold their own during the years of general activity and confident optimism. A similar effect, though not so marked, appears in the somewhat larger proportion of failures, from 1893 to 1896, among those rated as in

"very good credit." The whole series of figures illustrates the course of events preceding and following a commercial crisis: before, hopeful speculation, and the continued prosecution of ill-directed enterprises; after, collapse, and the gradual and reluctant weeding-out of the unsound elements.

An attempt was made also to classify the failures according to their causes, such as "incompetence," "lack of capital," and what not. Figures arranged on this basis are given for the years from 1893 to 1896. It may be serviceable to put on record here the main results of this classification (for the United States alone).

PER CENT. OF FAILURES DUE TO VARIOUS CAUSES.

	BY NUMBER OF FIRMS.				BY LIABILITIES.			
	1893	1894	1895	1896	1893	1894	1895	1896
Incompetence	16.4	14.1	13.7	12.5	7.4	10.4	9.8	13.6
Inexperience	6.1	4.2	4.0	4.6	1.2	2.1	1.7	1.6
Lack of capital	33.5	34.6	33.2	31.1	19.8	25.8	26.1	20.7
Unwise credits	4.7	4.2	4.6	4.4	3.4	3.5	5.1	3.5
Speculation (outside)	1.2	.8	1.1	1.2	5.6	3.0	3.7	4.3
Neglect of business	3.2	2.5	2.6	2.3	1.0	1.3	1.3	.9
Extravagance	1.3	1.1	1.0	.9	1.0	1.0	1.6	1.1
Fraudulent disposition	7.4	8.0	8.9	9.2	4.2	6.4	6.9	5.7
Disaster (commercial crisis) . .	22.3	25.9	24.9	27.5	45.2	39.0	33.6	37.4
Failures of others	2.9	2.5	2.3	2.7	10.0	6.2	8.1	9.2
Undue competition	1.2	2.1	3.6	3.6	1.0	1.3	2.0	2.0

Something perhaps, though not a great deal, can be gleaned for the purposes of the student of economics from these figures. Fraud seems to be more common among the small concerns than among the large: so much is indicated by the greater weight assigned to this cause for number of failures than for liabilities. Failures of others, and outside speculation, as might be expected, affect the large firms more than the small; while neglect of business is more common among the small. But the grounds of classification must contain large possibilities of error, while the great proportion of failures ascribed to commercial crisis rather registers a familiar fact than states a cause.

By the Conciliation Act of 1897 statutory authority was for the first time conferred upon the English Board of Trade to act as conciliator in industrial disputes. The act runs as follows:—

Where a difference exists or is apprehended between an employer or any class of employers and workmen, or between different classes of workmen, the Board of Trade may, if they think fit, exercise all or any of the following powers, namely: (a) inquire into the causes and circumstances of the difference; (b) take such steps as to the Board may seem expedient for the purpose of enabling the parties to the difference to meet together by themselves or their representatives, under the presidency of a chairman mutually agreed upon or nominated by the Board of Trade or by some other person or body, with a view to the amicable settlement of the difference.

Thus empowered, the Board of Trade has during the past year continued to pursue that policy of cautious mediation which it had already entered upon without express authorization. It has settled, to the satisfaction of both parties, a dispute between the London & North-Western Railway Company and its employees, which threatened to dislocate traffic; and it has been applied to by employers as well as employed in several other cases. Settlements have been reached, according to the statement of Mr. Ritchie, the minister at the head of the department, "not by the fussy or officious interference of the Board of Trade, but by bringing the parties together. The principal object of the Board of Trade in all these cases has always been not to put their statutory powers as conciliators into force, but to get those concerned to settle their disputes among themselves. They believe that, if they can get the parties to a dispute round a table, it will be found that there is really no very great difference between them, and that the difficulties in the way of a settlement will disappear." In one instance only has the Board been unsuccessful,—in that of the strike at the great Penrhyn slate quarries, which is still dragging out its weary length. Lord Penrhyn, the owner of the quarries, declined to accede even to the preliminary suggestions of the Board of Trade as to the arrangements for a meeting between the parties; and his refusal occasioned a debate in the House of Commons on January 28.

Mr. Balfour, the leader of the House, and Mr. Ritchie, the president of the Board of Trade, deprecated any attempt to enter into the merits of the dispute itself, on the ground that discussion in Parliament would but impede the future working of the Conciliation Act; and the motion for adjournment was finally negatived without a division. But the Conservative government assumed complete responsibility for the action of the department, and Mr. Ritchie declared that every one of the letters from the department to Lord Penrhyn had been written "under his own personal supervision." To the proposal that a representative of the Board should be present at the interview between Lord Penrhyn and a deputation of the men, Lord Penrhyn had answered that he must "decline to comply with such a suggestion, as my acceptance of it would establish a precedent for outside interference with the management of my private affairs"; and Sir Courtenay Boyle, the permanent secretary, had replied, doubtless with Mr. Ritchie's cognizance, in the following significant terms: "There is no desire to press the matter against your wishes; but, in view of the provisions of the Conciliation Act, the Board cannot admit that the settlement of a prolonged dispute, affecting thousands of workmen and their families, can be rightly regarded as a matter of private interest only."

THE English advisers of the Egyptian government have been confronted with the difficulty of agricultural credit in the form in which it has for centuries repeatedly presented itself in countries cultivated by peasants. The practice of the fellaheen is to borrow in the spring from Greek usurers at ruinous rates, 20 or 30 per cent., and repay when the cotton crop is ripe. This gives rise to petty tyranny and injustice, and creates among the peasants much unintelligent but natural discontent. Moreover, the money-lenders, not being Egyptian subjects, are exempt from the native courts and subject only to the Mixed Tribunals, which find themselves burdened by a weight of trivial business, and compelled

to apply rules of law which, however proper in Western lands, work hardship in the East. The government, acting upon the advice of its English officials, has accordingly determined to try the experiment of supplanting the usurer by making small loans itself on good security. It appears from the last report of Lord Cromer, the English consul-general, that in 1896 the government made a beginning by effecting loans for £7,700, at 6 per cent., to small cultivators; that the whole of the capital and interest, except £20, was repaid by the end of November; and that in consequence the money-lenders had to lower their rates. The government does not expect to be able to carry on considerable operations of this kind; but even a very small venture may have a wholesome effect on the state of mind alike of the usurer and of the fellaheen.

THE first experiment in compulsory insurance for the unemployed has been given up. The town of St. Gall, in Switzerland, which adopted a system for such insurance in 1895, has voted to abandon it. But the conditions of the experiment were such that the advocates of this plan for social reform stoutly deny that its failure has serious significance.

A compact account of the episode is given in the first number of the *Archiv für Soziale Gesetzgebung* for the current year, which is supplemented by some incisive comments from Dr. G. Adler in *Soziale Praxis* (November 19, 1896). The canton of St. Gall passed an act in 1894 by which communes were authorized, individually or by joint action, to establish compulsory out-of-work insurance. The town of St. Gall, capital of the canton, with some 28,000 inhabitants, took advantage of the permission, at first endeavoring to secure joint action with two neighboring towns (virtually suburbs), and, in default of their adhesion, proceeding independently. The system went into operation July 1, 1895. The premiums—which, being compulsory, were virtually

taxes—were divided into three classes, with benefits to correspond, on the basis of wages received, thus:—

<i>Wages, per day.</i>	<i>Premium, per week.</i>	<i>Benefit, per day.</i>
3 francs	15 centimes	1.80 francs
3 @ 4 "	20 "	2.10 "
4 @ 5 "	30 "	2.40 "

The premiums were collected directly from the workmen, through stamps bought by them and affixed in books. Non-payment was visited not only with forfeiture of the right to benefit, but with fine and imprisonment; though in practice these latter penalties, as might be expected, were never applied, and even the former and natural one was not rigidly enforced. Benefits were to be paid only after five days (not necessarily consecutive) of non-employment, and in no case were to continue for more than sixty days.

The collection of the premiums, as might have been expected, proved to be slow and hopelessly incomplete. Notices and threats were sent out "by the thousand," yet most of those inscribed as insured were in arrears. It is stated (not officially) that at the close of the first year no less than 1,991, or nearly two-thirds of the insured, were behind in their payments. The day laborers, naturally, were the slowest in payment and at the same time the most frequent applicants for aid. Failure to pay was evidently, in practice, not conclusive against the receipt of benefits; for the official report remarks that "most naïve of all was the request of those who wished after New Year [when benefits first became payable] simply to deduct their premiums in arrears from the benefits claimed. In such cases the previous failure to make due payment was subjected to a fine of two francs for each month."

A bureau for providing employment was set up, but evidently with no success and apparently with no very stringent administration. Applicants were not required to accept work outside the town; and, of the 430 applicants for aid, only 67 found work. Among the day laborers, who were most remiss in payment of premiums and were also the most frequent applicants for benefits, some were "little in earnest in trying to find work or in sticking to it when found."

The number insured — *i.e.*, liable to pay premiums — in November, 1895, when things had settled down, was 3,085. The number to whom benefits were paid in the fiscal year 1895-96 was 363. But, as no right to benefit accrued until after payment of premiums for six months, the number of beneficiaries was practically that for half a year only. Of those who got aid, vastly the larger number, as has already been said, and, indeed, as almost goes without saying, were day laborers, insured in the lowest class. Next in number were the masons, whose work is largely dependent on the season; while skilled workmen in general made very small claims for indemnity.

The effect was that the skilled workmen were taxed to support the day laborers and others out of work. It is true that the city assumed the expenses of administration (some 5,600 francs), and added a subsidy of 6,000 francs; while the canton contributed a further 3,000 francs. But the expenses, all told, were 40,000 francs, and had thus to be met mainly from premiums. The premiums — virtually, taxes — amounted to 15.60 francs a year for each of the workmen in the highest class, who got little in the way of benefits. Hence these voted against the continuance of the system, and brought about its abolition. At a town meeting held in November, 1896, their votes caused a majority of three to two against the insurance bureau, which, accordingly, will cease to exist at the close of the current fiscal year, — on June 30, 1897.

The advocates of the general plan of unemployed insurance point out that various mistakes were made in this particular case. The area covered was too small. The failure to include the suburbs was particularly unfortunate. The premiums should have been collected from employers, not from the workmen. Larger contributions should have been made by the town or canton, or by the employers in trades specially subject to fluctuations. The administration was lax, — perhaps inevitably so under the circumstances, but, at all events, injuriously lax. And doubtless it is true that this trial was hasty and ill-advised, and that nothing more can be inferred from it than that average human nature presents very troublesome obstacles to the healthy operation of any such scheme, — which was not in need of demonstration.

THE *Journal Officiel* in its issue of January 6 gives the official results of the census enumeration of March 29, 1896. The total population of France, as then ascertained, and the population at previous census periods during the last two decades,* was:—

	Population.	Gain since the preceding enumeration.
1876	36,905,788	802,867
1881	37,672,048	766,260
1886	38,218,903	746,955
1891	38,342,948	124,045
1896	38,517,975	175,027

It is mentioned in the report in the *Journal Officiel* that in recent years there has been some increase of emigration, especially to Algeria, and that the French military forces stationed in foreign countries are larger than in 1891; but neither of these factors would lead to any serious qualification of the statement that the population of France tends to be practically stationary.

The question suggests itself whether the slight gain in total population resulted from immigration or from natural increase by excess of births. The census report on its face would suggest the latter explanation; for it appears that the number of enumerated foreigners has declined, and has declined more rapidly since 1891 than in the period 1886-91. In 1886 the number of foreigners was 1,115,214; in 1891, 1,101,798; in 1896, 1,027,491. But, on the other hand, the statistics as to the movement of population up to and including 1895, given in a later issue of the *Journal Officiel*, prove a loss, and not a gain, by natural growth. For the five years 1891-95 we have the following figures:—

	Births.	Excess of Deaths.
1891	—	10,503
1892	—	20,041
1893	7,146	—
1894	39,768	—
1895	—	17,813
	46,914	48,357

*The figures for the years preceding 1896 are taken from the *Annuaire Statistique*, except that for 1891 the figure there given (38,343,192) has been replaced in the text by that reached after correction of the first results of the enumeration of 1891.

The quinquennial period shows a slight net excess of deaths. Therefore the increase, such as it is, which the total population of France shows since 1891, must be due solely to immigration; while the decrease in the number of enumerated "foreigners" must be ascribed to the naturalization of a certain number of the immigrants.

While the total number stands almost still, change in its geographical distribution over the country continues. The cities gain, the country loses. The total population of the cities having a population of over thirty thousand increased between 1891 and 1896 by 327,009. The movement towards the cities has therefore proceeded at about the same rate as in the period 1886-91, when the urban population increased 362,444. Of the 60 cities which in 1891 had more than thirty thousand inhabitants, 53 have now gained in all 334,461, 7 have lost 7,452; leaving a net urban increase in 1891-96 of 327,009. Paris has gained 88,877; Marseilles, 38,490; Lyons, 27,951; and so on.

It is part of the same phenomenon that most of the departments lose in population. Out of 87 departments 63 have a less population than in 1891: only 24 gain. In not a few cases the department loses, notwithstanding an increase in the population of its urban centre. Here again, as in the figures of total population, there has been a marked change since 1886; for

in 1881-86 . . .	53 departments gained, 29 departments lost.
1886-91 . . . 32	" " 55 " "
1891-96 . . . 24	" " 63 " "

The decade just passed clearly is that in which the French have had to face the phenomenon of *dépopulation*.

RECENT PUBLICATIONS UPON ECONOMICS.

[Chiefly published or announced since January, 1897.]

I. GENERAL WORKS, THEORY AND ITS HISTORY.

- ADAMS (Henry C.). Economics and Jurisprudence. President's Address to the American Economic Association. New York: Macmillan Co. 8vo. pp. 48. 50 cts.
- BÜCHER (K.). Arbeit und Rhythmus. [In Abhandlungen der Sächs. Gesellsch. der Wissenschaften.] Leipzig: S. Hirzel. 8vo. pp. 134.
- EHRENBERG (R.). Der Handel: Seine wirtsch. Bedeutung, nationalen Pflichten, und Verhältnis zum Staate. Jena: Fischer. 8vo. 2 m.
- GIDDINGS (F. H.). The Elements of Sociology. New York: Macmillan Co. [Announced.]
- . The Theory of Socialization. A Syllabus of the Principles of Sociology. New York: Macmillan Co. 8vo. pp. 47. 60 cts.
- M'KECHNIE (W. S. G., lecturer in the University of Glasgow). The State and the Individual. An Introduction to Political Science, with special reference to Socialistic and Individualistic Theories. Glasgow: Maclehoose; New York: Macmillan. 8vo. pp. 451. \$3.50.
- NOUVEAU DICTIONNAIRE d'Economie Politique [edited by Say et Chailley]. Supplément. Paris: Guillaumin. [Announced.]
- VAZEILLE (A., Dr.). La Question Sociale est une Question de Méthode. Paris: Giard & Brière. 8vo. pp. 94. 2 fr.
- VIGNES (M.). La Science Sociale d'après les Principes de Le Play et de ses Continuateurs. Paris: Giard & Brière. 2 vols. 8vo. 16 fr.
- In Periodicals.*
- BENINI (R.). Di Alcuni Punti Oscuri della Demografia [continued]. Giorn. degli Econ., Dec.
- . Di Alcune Curve descritte da Fenomeni Economici aventi Relazione colla Curva del Reddito o con quella del Patrimonio. Giorn. degli Econ., March.
- DEVAS (C. S.). The Restoration of Economics to Ethics. Internat. Journ. of Ethics, Jan.
- EDGEWORTH (F. Y.). La Curva delle Entrate e la Curva di Probabilità. Giorn. degli Econ., March.
- EINAUDI (L.). La Distribuzione della Ricchezza nel Massachusetts. Giorn. degli Econ., March.
- FISHER (Irving). What is Capital? Econ. Journ., Dec.
- GOMORY (Olivier). Der Preis als selbstständige Kategorie. Jahrb. Nat. Oek., 13, Heft 2.
- MOLINARI (G.). Le Mécanisme Naturel de la Production et de la Distribution. Journ. des Econ., Dec.
- FARETO (V.). Aggiunta allo Studio sulla Curva delle Entrate. Giorn. degli Econ., Jan.
- ROSS (E. A.). Social Control. VI. Amer. Journ. of Sociol., Jan.
- SULZER (G.). Begriff und Aufgaben der Gesellschaftswissenschaft. I. Zeitschr. Volksw., Soc.-Pol., und Verw., 5, Heft 4.
- TAYLOR (W. G. L.). Values, Positive and Relative. Annals Amer. Acad., Jan.
- THON (O.). The Present Status of Sociology in Germany. Amer. Journ. of Sociol., Jan., March.

WARD (L. F.). Social Genesis. Individual Teles. Amer. Journ. of Sociol., Jan., March.

WINIARKI (L.). Deux Théories d'Équilibre Économique. Revue Int. de Sociol., Dec.

II. SOCIAL QUESTIONS, LABOR AND CAPITAL.

BOISSARD (A.). Le Syndicat Mixte, Institution Professionnelle, d'Initiative Privée, à Tendance Corporative. Paris: Guillaumin. 8vo. pp. 206.

HIRSCH (H.). Sozialpolitische Studien. Beiträge zur Politik, Geschichte, Ethik der sozialen Frage. Berlin: R. L. Prager. 8vo. pp. 157. 3 m.

HURET (Jules). Enquête sur la Question Sociale en Europe. Avec Préface de J. Jaures et P. Deschanel. Paris: Perrin. 8vo. pp. 394.

LAVOLLÉE (R.). Études de Morale Sociale. Lectures et Conférences. Paris: Guillaumin. 18mo. 3 fr.

MARSON (C. L.). Charity Organization and Jesus Christ. London: Scientific Press. 8vo. pp. 60. 1s.

MORISON (W. D.). Our Juvenile Offenders. New York: Appleton. 12mo. \$1.50.

PERONNET (Ch.). La Conciliation et l'Arbitrage, en Matière de Conflits Collectifs entre Patrons et Ouvriers. Paris: Larose. 8vo. pp. 345.

ROUSSIERS (Paul de). Le Trade-unionisme en Angleterre. Paris: A. Colin. 8vo. pp. 356. 4 fr.

SCHLOSS (D. F.). Contracts given out by Public Authorities to Associations of Workmen. [Report to Labour Department, Board of Trade.] London: Eyre & Spottiswood. 8vo. pp. 346. 1s. 5d.

ULLMO (L.). Le Problème Social. Paris: F. Alcan. 18mo. pp. 216. 4 fr.

WOODWORTH (A. V.). Report of an Inquiry into the Condition of the Unemployed, conducted under the Toynbee Trust. London: J. M. Dent & Co. 12mo. pp. 62. 6d.

In Periodicals.

BAUER (Stephan). Die Heimarbeit

und ihre geplante Regelung in Oesterreich. Archiv Soz. Gesetzg., 10, Heft 2.

BERTRAM (A.). Le Mouvement Ouvrier en Australasie. Rev. d'Econ. Pol., Jan.

CARROLL (T. A.). Conciliation and Arbitration in the Boot and Shoe Industry. Bulletin of Department of Labor, Jan.

COMMONS (J. R.). The Day Labor and Contract System on Municipal Works. Yale Rev., Feb.

DESCHESNE (L.). L'Inspection de l'Industrie en Autriche. Rev. d'Econ. Pol., Feb.

JOHNSON (Emory R.). Railway Relief Departments. Bulletin of Department of Labor, Jan.

KING (W. L. M.). Trade-union Organization in the United States. Journ. of Polit. Econ., March.

LEPPINGTON (C. H. d'E.). The Charity Organization System of To-day. Econ. Rev., Jan.

LEVASSEUR (E.). Du Degré de Bien-être de l'Ouvrier aux États-Unis. Journ. des Econ., March.

MAHAIM (E.). L'Histoire du Trade-unionisme. Rev. d'Econ. Pol., Feb.

MARUCCI (C.). Beneficenza e Terre Incolte. Giorn. degli Econ., Jan.

MATAJA (V.). Die Anfänge des Arbeiterschutzes in Frankreich. Zeitschr. Volksw., Soc.-Pol., und Verw., 5, Heft 3, 4.

MUENSTERBERG. Principles of Public Charity and Private Philanthropy in Germany. Amer. Journ. of Sociol., Jan., March.

SOMBART (W.). Ideale der Sozialpolitik. Archiv Soz. Gesetzg., 10, Heft 1.

STEWART (Ethelbert). Rates of Wages under Public and Private Contract. Bulletin of Department of Labor, Nov.

- THIES (K.). Die Konsumvereine und die neueste deutsche Wirthschaftspolitik. Archiv Soz. Gesetzg., 10, Heft 1.
- TÖNNIES (F.). Hafenarbeiter und Seeleute in Hamburg vor dem Strike 1896-97. Archiv Soz. Gesetzg., 10, Heft 2.
- TOLMAN (W. H.). Half a Century of Improved Housing Effort by the New York Society [second article]. Yale Rev., Feb.
- WEBB (Sidney and Beatrice). Die Stellung der britischen Gewerkschaften gegenüber der Einführung neuer Arbeitsmethoden. Archiv Soz. Gesetzg., 10, Heft 1.
- WEICHS-GLON. Das Handwerk und sein goldener Boden. Zeitschr. Ges. Staatsw., 53, Heft 1.

III. SOCIALISM.

- CALWER (R.). Einführung in den Sozialismus. Leipzig: G. H. Wigand. 8vo. pp. 242. 3.50 fr.
- CALMES (J.). La Propriété devant le Socialisme Contemporain. Paris: Lecoffre. 8vo. pp. 257. 2.50 fr.
- CHIAPPPELLI (A.). Le Premesse Filosofiche del Socialismo. Memoria letta alla R. Accademia di Napoli. Naples: Tip. della Università. 4to. pp. 95.
- HAMON (A.). Le Socialisme et le Congrès de Londres. Etude Historique. Paris: Stock. 8vo. pp. 280.
- LABRIOLA (A.). Essais sur la Conception Materialiste de l'Histoire. Avec Préface de G. Sorel. [Bibliothèque Socialiste Intern.]. Paris: Giard & Brière. 18mo. pp. 349. 3.50 fr.
- LORENZ (M.). Die marxistische Sozialdemokratie. [In Bibliothek der Sozialwissenschaft, edited by H. Kurella.] Leipzig: G. H. Wigand. 8vo. pp. 239. 3.50 m.
- LORENZ (O.). Die materialistische Geschichtsauffassung zum ersten Male systematisch dargestellt und kritisch beleuchtet. Leipzig: C. Braun. 8vo. pp. 115.
- SOMBART (W., Prof.). Sozialismus und soziale Bewegung im 19 Jahrhundert. Jena: Fischer. 8vo. pp. 147. 2 m.
- STUBBS (C. W.). A Creed for Christian Socialists. London: W. Reeves. 8vo. pp. 122. 2s.
- VERLY (Hippolyte). Le Triomphe du Socialisme: Journal d'un Ouvrier Révolutionnaire. Paris: Le Soudier. 12mo. 2.50 fr.
- WALCKER (K.). Karl Marx. Gemeinverständliche, kritische Darstellung seines Lebens und seiner Lehren. 8vo. pp. 60. Leipzig: Rossberg. 12mo m.
- WENKSTERN (Dr. A.). Marx. Leipzig: Duncker & Humblot. 8vo. pp. 265.
- In Periodicals.*
- DIEHL (K.). Sozialismus und soziale Bewegung im 19 Jahrhundert [review of Sombart]. Preuss. Jahrb., Feb.
- ZUEBLIN (C.). A Sketch of Socialistic Thought in England. Amer. Journ. Sociol., March.

IV. LAND.

- BRENTANO (Lujo). Agrarpolitik. Ein Lehrbuch. I Theil: Theoretische Einleitung. Stuttgart: Cotta. 8vo. pp. 145. 3 m.
- GREEN (J. L.). Allotments and Small Holdings. London: Sonnenschein; New York: Scribner's. 12mo. \$1.
- ROSTWOROWSKI (A. J. F. C.). Die Entwicklung der bauerlichen Verhältnisse in Polen im 19 Jahrhundert. [In Conrad's Abhandlungen.] Jena: Fischer. 8vo. pp. 97. 2.40 m.
- TISZA (S. von). Ungarische Agrarpolitik. Die Ursachen des Frei-

falls der landwirthschaftlichen Produkte. Leipzig: Duncker & Humblot. 8vo. pp. 91. 1.80 m.

In Periodicals.

BEAR (W. E.). Food Crops and Famine in India. *National Rev.*, Feb.

BRENTANO (L.). Pourquoi n'y a-t-il pas de Houbereaux [Junker] en Vieille Bavière? *Rev. d'Econ. Pol.*, Jan.

—, Agrarian Reform in Prussia. *Econ. Journal*, March.

EMERICK (C. F.). Agricultural Discontent. *III. Pol. Sci. Quarterly*, March.

GRÜNBERG (K.). Studien zur österreichischen Agrargeschichte und Agrarpolitik. 2 Artikel. *Jahrb. Gesetzg.*, 21, Heft 1.

MORRIS (O'C.). The Land System of Ireland. *Scottish Rev.*, Jan.

YERBURGH (R. A.). Agricultural Credit Banks in Germany, Italy, Great Britain. *Journ. Statist. Soc.*, Sept.

V. POPULATION, EMIGRATION, AND COLONIES.

LANESSAN (J. L.). Principes de Colonisation. Paris: F. Alcan. 8vo. 6 fr.

MOLINARI (G. de). La Viriculture. Ralentissement du Mouvement de la Population. Causes et Remèdes. Paris: Guillaumin. 8vo. pp. 253. 3.50 fr.

In Periodicals.

KERMAUNER (F.). Statistische Untersuchungen über Sterblichkeit der Säuglinge an Magendarmkrankheiten, unter Berücks. der

Wohlhabenheit der Eltern. *Jahrb. Nat. Oek.*, 13, Heft 2.

LEROY-BEAULIEU (P.). Les Colonies Anglaises et les Projets d'Organisation de l'Empire Britannique. *Rev. des Deux Mondes*, Jan. 1.

RAMERI (L.). Calcolo della Vita Media. *Giorn. degli Econ.*, Dec.

WALDHECKER (P.). Ansiedelungskommission und Generalkommission. Ein Beitrag zur Inneren Kolonisation des Ostens. *Jahrb. Gesetzg.*, 21, Heft 1.

VI. TRANSPORTATION AND EXCHANGE.

BLACKMORE (E.). The British Mercantile Marine. Philadelphia: J. B. Lippincott Co. 12mo. \$1.50.

HOPKINS (W. R.). The Street Railway Problem in Cleveland. [In *Economic Studies*, published for American Econ. Assoc.] New York: Macmillan. 8vo. pp. 87. 75 cts.

MILLION (J. W.). State Aid to Railways in Missouri. Chicago: Univ. of Chicago Press. 8vo. pp. 264. \$1.75.

SPIERS (F. W.). The Street Railway Problem of Philadelphia. Baltimore: Johns Hopkins Press. [Announced.]

In Periodicals.

BARBERI (L.). Lo Sviluppo della

Rete Ferroviaria degli Stati Uniti e le sue Variazioni. *Giorn. degli Econ.*, Jan., Feb.

BELLET (D.). Comment périclite une Marine Marchande [in France]. *Journ. des Econ.*, Feb.

FLECK. Studien zur Geschichte des preussischen Eisenbahnwesens. [Continued.] *Archiv f. Eisenbahnw.*, Heft 1.

KAUFMANN (R. von). Die Eisenbahnpolitik Frankreichs [reply to a review, by A. Leyen, in *Archiv f. Eisenbahnwesen*]. *Ann. des Deutsch. Reichs*, No. 4.

PRICE-WILLIAMS (R.). Railway Rates and Terminal Charges. *Journ. Statist. Soc.*, Sept.

VIL. INTERNATIONAL TRADE AND CUSTOMS TARIFFS.

- COX (Harold). Are we ruined by the Germans? [Public. of Cobden Club.] London: Cassell. 8vo. pp. 62. 6d.
- FISK (George M.). Die handelspolitischen und sonstigen völkerrechtlichen Beziehungen zwischen Deutschland und den Vereinigten Staaten. [In Münchener Volksw. Studien.] Stuttgart: Cotta. 8vo. pp. 268. 5.60 m.

In Periodicals.

- COLMER (C. G.). An Imperial Customs Union. Econ. Journal, Dec.
- FLUX (A. W.). British Trade and German Competition. Econ. Journal, March.
- GUYOT (Yves). Étude sur le Commerce International Comparé. Journ. des Écon., Jan.
- MURRAY (K. B.). Mr. Chamberlain and Colonial Commerce. Econ. Journal, March.

VIII. MONEY, BANKING, CREDIT, AND PRICES.

- HOUDARD (A.). Le Malentendu Monétaire. Paris: Guillaumin. 8vo. pp. 48.
- MODEL (P.). Die grossen Berliner Effektenbanken. Aus dem Nachlasse des Verfassers herausgegeben, mit Vorrede von Prof. Ad. Wagner. Jena: Fischer. 5 m.
- POUNET (A.). La Banque de France. Le Renouveaulement du Privilège. Paris: Guillaumin. 8vo. pp. 84. 2 fr.
- WILEMAN (J. P.). Brazilian Exchange: The Study of an Inconvertible Currency. London: E. Wilson. 8vo. 5s.

In Periodicals.

- FISHER (Willard). The Currency of China. Yale Rev., Feb.
- FLAIX (Fournier de). Le Problème Monétaire [continued]. Journ. Soc. Statist. de Paris, Jan.
- FRANÇOIS (G.). Les Chambres de Compensation et les Caisse de Liquidation [to be continued]. Journ. des Écon., March.

- HELFFERICH (K.). Das deutsche System der Kontingentierung des Notenumlaufs. Finanz-Archiv, 13, Band 2.
- HARTUNG (H.). Die schweizerische Bundesbank. Jahrb. Nat. Oek., 13, Heft 1.
- KINLEY (D.). Credit Instruments in Retail Transactions. Journ. of Polit. Econ., March.
- MITCHELL (W. C.). Greenbacks and the Cost of the Civil War. Journ. of Polit. Econ., March.
- MONGIN (M.). La Monnaie et la Mesure des Valeurs. Rev. d'Écon. Pol., Feb.
- SCOTT (W. A.). The Quantity Theory. Annals Amer. Acad., March.
- STEELE (F. E.). Bank Amalgamations. Econ. Journ., Dec.
- TIEDEMANN (C. G.). Silver Free Coinage and Legal Tender Decisions. Annals Amer. Acad., March.
- WICKSELL (Knut). Der Bankzins als Regulator der Warenpreise. Jahrb. Nat. Oek., Heft 2.

IX. FINANCE AND TAXATION.

- NOBLE (F. H.). Taxation in Iowa: Historical Sketch, Present Status, and Suggested Reforms. St. Louis: Nixon-Jones Co. 8vo. pp. 121. \$1.
- SCHÄFFLE (A. E. F.). Die Steuern.

- [Band III. of Finanzwissenschaft, in Hand- und Lehrbuch der Staatswissenschaften.] Leipzig: C. L. Hirschfeld. 8vo. pp. 649. 20 m.
- SCHMID (F.). Zur Reform der württembergischen Gemeindesteuern.

Tübingen: Laupp. 8vo. pp. 131.
3 m.

In Periodicals.

- ANGELL (E. A.). The Tax Inquisitor System in Ohio. *Yale Rev.*, Feb.
- BLUNDEN (G. H.). Some Observations on the Distribution and Incidence of Rates and Taxes [with reference to the transfer of charges from the former to the latter]. *Journ. Statist. Soc.*, Dec.
- BERTOLINI (A.). Die Katasterfrage in Italien. *Zeitschr. Volksw., Soc.-Pol., und Verw.*, 5, Heft 4.
- BOCCIUS (F.). Bemerkungen über eine allgemeine Biersteuer. *Ann. des Deutsch. Reichs*, 1892, No. 2.
- COLLETTI (F.). Industria Armenizia e Imposte. *Giorn. degli Econ.*, Dec.
- DAUBERT (V.). Beiträge zur Geschichte der württembergischen Biersteuer. *Ann. des Deutsch. Reichs*, 1897, No. 2.
- EDGEWORTH (F. Y.). The Pure Theory of Taxation. *Econ. Journal*, March.
- EHLERS (O.). Die Stellung der Gebühr im Abgabewesen. *Finanz-Archiv*, 13, Band 2.
- INHÜLSEN (C. H. P.). Das englische Finanzgesetz vom Jahre 1896. *Finanz-Archiv*, 13, Band 2.
- LEROY-BEAULIEU (P.). La Méthode Nécessaire pour les Réformes d'Impôts. *Econ. Français*, Feb. 13, 20.
- PLEHN (C. C.). Classification in Public Finance. *Pol. Sci. Quarterly*, March.
- PLENER (E. von). Einkommensteuer in Frankreich. *Zeitschr. Volksw., Soc.-Pol., und Verw.*, 5, Heft 3.
- SALLEFRANQUE (L.). État Général et Comparatif du Régime Fiscal en France [1830-1897]. *Journ. Soc. Statist. de Paris*, Feb.
- SCHMITZ (O.). Das mexikanische Finanzwesen. *Finanz-Archiv*, 13, Band 2.
- STEMPEL (W.). Die Zinsherabsetzungen der preussischen Staatsschuld im 19 Jahrhundert, unter Berücks. der Technik. *Finanz-Archiv*, 13, Band 2.
- UNSIGNED. Financial Relations of Great Britain and Ireland. *Edinburgh Rev.*, Jan.
- WHITTEN (R. H.). The Assessment of Taxes in Chicago. *Journ. of Polit. Econ.*, March.

X. HISTORY, BIOGRAPHY, AND DESCRIPTION.

- ARNOLD (B. W., Jr.). History of the Tobacco Industry in Virginia from 1800 to 1894. [In *Johns Hopkins Univ. Studies*.] Baltimore: Johns Hopkins Press. 8vo. pp. 90. 50 cts.
- BABELON (E.). Les Origines de la Monnaie Considérées au Point de Vue Economique et Historique. Paris: Firmin Didot. 18mo. pp. 427. 3.50 fr.
- BAILEY (M. B.). A New Industry [Cotton Bag Manufacture]: With a Sketch of Events in the Life of its Founder. London: Simpkin. 8vo. pp. 238. 7s. 6d.
- FIELD (Edward). The Colonial Tavern: A Glimpse of New England Town Life in the 17th and 18th Centuries. Providence: Preston & Rounds. \$2.
- HIGGS (Henry). The Physiocrats. Six Lectures on the French Economistes. London and New York: Macmillan. 12mo. pp. 158. \$1.10.
- MAITLAND (F. W.). Domesday Book and Beyond. London: Cambr. Univ. Press. Royal 8vo. pp. 542. 15s.
- MARTIN-SAINT-LEON (Étienne, Docteur en Droit). Histoire des Corporations de Métiers depuis leur Origine jusqu'à leur Suppression en 1791: suivie d'une Étude sur l'Idée Corporative au XIX^e Siècle. Paris: Guillaumin. 8vo. pp. 670. 8 fr.
- MASSON (P.). Histoire du Commerce Français dans le Levant au XVII^e Siècle. Paris: Hachette. 8vo. 10 fr.

- NICHOLLS (W. J.). The Story of American Coals. Philadelphia: Lippincott Co. 8vo. pp. 405.
- ROGERS (J. E. Thorold). History of Agriculture and Prices. Vols. VII. and VIII. London: Clarendon Press. [Announced.]
- THURNEYSSEN (F.). Das münchener Schreinergerwerbe. Wirthsch. und Soziale Studie. (In Münchener Volksw. Studien.) Stuttgart: Cotta. 8vo. pp. 170. 3.60 m.
- TRAIL (H. D.). Social England. Sixth [concluding] volume: From Waterloo to the General Election of 1885. London: Cassell & Co.; New York: Putnam's. 8vo. \$3.50. [Announced.]
- WELCH (Charles). Modern History of the City of London: A Record of Municipal and Social Progress from 1780 to the Present Day. London: Blades. 8vo. pp. 504. 42s.
- WELTI (Fr. E., editor). Die Stadtrechnungen von Bern aus den Jahren 1375-84. Bern: Stämpfische Buchdruckerei. 8vo. pp. 366. 5.50 fr.
- In Periodicals.*
- ASHLEY (W. J.). Journeymen's Clubs. Pol. Sci. Quarterly, March.
- BREYSIG (K.). Die soziale Entwicklung der führenden Völker Europas in der neueren und neuesten Zeit. 2 Artikel. Jahrb. Gesetz., 21, Heft 1.
- CONTENTO (A.). Della Base Economica della Storia. Giorn. degli Econ., Feb. [To be continued.]
- COSTE (A.). Les Bénéfices Comparées du Travail et du Capital depuis 50 Ans [criticism of Neymarck], Journ. Soc. Statist. de Paris, Dec.
- LEVASSEUR (E.). Concentration of Industry and Machinery in the United States. Annals Amer. Acad. Polit. and Soc. Sci., March.
- LONG (R. S.). Andrew Jackson and the National Bank. Eng. Hist. Rev., Jan.
- MICHAELIS (R.). Kritische Würdigung der Preise des Edictum Diocletiani vom nat.-ök. Standpunkte. Zeitschr. Ges. Staatsw., 53, Heft 1.
- NEYMARCK (A.). Le Morcellement des Valeurs Mobilières, les Salaires, la Part du Capital et du Travail. Journ. Soc. Statist. de Paris, July, Aug.
- SIEVEKING (H.). Die Genueser Seidenindustrie im 15 und 16 Jahrhundert. Ein Beitrag zur Geschichte des Verlagsystems. Jahrb. Gesetzg., 21, Heft 1.
- WILLOUGHBY (W. F.). Industrial Communities [in several European countries]. Bulletin of Department of Labor, Nov.

XI. STATISTICS.

In Periodicals.

- FAULKNER (R. P.). Crime and the Census. Annals Amer. Acad., Jan.
- JONES (Edward D.). Round Numbers in Wages and Prices. Public. of Amer. Statist. Assoc., Sept.-Dec.
- MARTIN (J. B.). On Some Developments of Statistical Research and Methods in Recent Years. Inaugural Address as President of the Statistical Society. Journ. Statist. Soc., Dec.
- SEECK (O.). Die Statistik in der alten Geschichte. Jahrb. Nat. Oak., 13, Heft 2.
- VIALLE (A.). Les Censuses des États d'Amérique. Journ. des Econ., Dec.

XII. REPRINTS, TRANSLATIONS, AND NEW EDITIONS.

- BLOCH (M.). Les Progrès de la Science Économique depuis Adam Smith. 2e édition, considérablement augmentée. 2 vols. Paris: Guillaumin.
- GIDDINGS (F. H.). Principes de

- Sociologie. Traduit de l'Anglais par le Vicomte Combes de l'Es-trade. Paris: Giard & Brière. Svo. pp. 380.
- LAUGHLIN (J. L.). History of Bi-metallicism in the United States. 2d revised edition. New York: D. Appleton Co. Svo. [Announced.]
- LORIA (Achille). Problèmes Sociaux Contemporains [translated from the Italian]. Paris: Giard & Brière. Svo. pp. 175. 6 fr.
- MENGER (A.). The Right to the Whole Produce of Labor. Translated by H. S. Foxwell. London and New York: Macmillan. Svo.
- MILL (John Stuart). Early Essays, selected by J. W. M. Gibbs [including the Essays on some Unsettled Questions in Political Economy]. London: Bell & Sons.
- PHILIPPOVICH (E. von). Grundriss der politischen Oekonomie. I. Band: Allgemeine Volkswirtschaftslehre. 2 Auflage. Freiburg: J. C. B. Mohr. Svo. pp. 404. 9.40 m.
- SIDGWICK (Henry). The Elements of Politics. Second edition, revised throughout. London: Macmillan Co. Svo. 14s.

XIII. NOT CLASSIFIED.

- BELL (J., Lord Provost) and PATON (J.). Glasgow: Its Municipal Organization and Administration. Glasgow: Maclehose. Svo. pp. 428.
- ELY (R. T.). The Social Law of Service. [Epworth League Reading Course.] New York: Eaton & Mains. 12mo. pp. 276. 90 cts.
- EMERY (H. C.). Speculation on the Stock and Produce Exchanges of the United States. [In Columbia Univ. Studies in Polit. Sci.] New York: Macmillan. Svo. pp. 230. \$1.50.
- LEEVY (E.). A Scheme for the Regulation of the Output of Coal by International Agreement. English version by J. Horton. London: Lockwood. Svo. 2s.
- SALMON (Lucy M., Professor in Vassar College). Domestic Service. New York: Macmillan Co. 12mo. pp. 307. \$2.
- UNSIGNED. The Revolutionary Tendencies of the Age, their Cause and their Ultimate Aim. New York: G. P. Putnam's Sons. Svo. pp. 171. \$1.25.
- WINES (F. H.) and KOREN (I.). The Liquor Problem in its Legislative Aspects: An Investigation made under the Direction of C. W. Eliot, Seth Low, and J. C. Carter. Boston: Houghton, Mifflin & Co. Svo. pp. 349. \$1.25.
- In Periodicals.*
- BADEN-POWELL (Sir George). The Doom of Cane Sugar. Fortnightly, Feb.
- BROOKS (R. C.). A Bibliography of Municipal Administration and City Conditions. [Published by the Reform Club, New York.] Municipal Affairs, Vol. I., No. 1, March.
- CONNOLLY (J. D., Consul). Land Taxation and Labor Laws in New Zealand [with text of the tax acts]. U.S. Consular Reports, Jan.
- DICKINSON (W. H.). The Water Supply of London. Contemp. Rev., Feb.
- FALK (H. J.). On Changes in Trade Organizations. Econ. Journ., Dec.
- LASTIG (Professor in Halle). Zum Entwurf eines Handelsgesetzbuches von 1896. Jahrb. Nat. Oek., 13, Heft 1.
- PAUL-DUBOIS (L.). Les Monopoles Industriels aux Etats-Unis. Rev. des Deux Mondes, Feb. 1.
- ROCHETIN (E.). La Production des Compagnies Françaises et Américaines d'Assurances sur la Vie. Journ. des Econ., Feb.